

**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION  
MAGNA INDUSTRIAL CO. LIMITED  
18/F, GUARDIAN HOUSE, HONG KONG.  
TEL: (852)2577 5187  
FAX: (852)2577 3190

IDENTITY(As Used on Label and List)  OMEGA 28	LAST ACCESSED: 25/09/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components <i>(Specific Chemical Identity: Common Name(s))</i>	CAS NO	TLV	Other Limits Recommended
Telomer of Polytetrafluoroethylene,	79070-11-4	N.E.	-
PTFE* Sodium Nitrite	7632-00-0	-	**

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	***	Specific Gravity (H2O = 1)	1.92
Vapor Pressure (- )	N.A.	Melting Point	>260C
Vapor Density (AIR = 1)	>1	Evaporation Rate (ether=1)	<1

Solubility in Water Insoluble

Appearance and Odor Smooth, off-white lubricating grease.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
None	-	N.A.	N.A.

**Extinguishing Media**

CO2, foam, dry chemical, water spray.

**Special Fire Fighting Procedures**

Avoid smoke inhalation. Water or foam may cause frothing.

**Unusual Fire and Explosion Hazards**

N.A.

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	Pyrolysis.

**Incompatibility (Materials to Avoid)**

Strong oxidizing materials.

**Hazardous Decomposition or Products**

Carbonyl fluoride, hydrofluoric acid gas, perfluorocarbon olefins, CO, and small amounts of other toxic fumes.

Hazardous Polymerization Will Not Occur	Conditions to Avoid Pyrolysis.
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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

See section I hazardous ingredients.

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**Effects of Overexposure**

There is no experience with overexposure. Prolonged or repeated contact with skin or contact with the eyes may cause irritation. Polytetrafluoroethylene (PTFE), when thermally decomposed, may cause polymer fume fever and flu-like symptoms. Inhalation of vapors from material at high temperatures (over 250C) must be avoided. Contamination of cigarettes or other tobacco products must be avoided.

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**Emergency & First Aid Procedures**

Eye contact: Wash thoroughly; contact physician if irritation persists.  
Skin contact: Wash with soap and water. Inhalation: Move to fresh air and refer to a physician for treatment.

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**SECTION VI - HEALTH HAZARD DATA**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Wipe or scrape up spillage and place it in a container for disposal. Wash walking surfaces thoroughly with detergent and water to reduce slipping hazard.

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**Waste Disposal Method**

Many states classify waste lubricants as "hazardous" which means disposal only by a licensed firm. Consult local, State and Federal regulations applicable to your area.

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**Precautions to Be Taken in Handling and Storing**

Exercise ordinary care in handling chemicals.

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**Other Precautions**

Avoid contamination of cigarettes or other tobacco products. Wash hands thoroughly before smoking. Users should be alert to the possibility that very small percentages of the population may display unexpected allergic skin reactions to otherwise innocuous industrial chemicals and raw materials.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Not required unless mists, smokes or vapors are produced at high temperatures.

<i>Ventilation</i>	<i>Local Exhaust</i>	<i>Special</i>
	N.A.	N.A.
	<i>Mechanical (General)</i>	<i>Other</i>
	N.A.	N.A.

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**Protective Gloves**

Rubber or plastic oil resistant gloves.

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**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

N.A.

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\*Not a hazardous material under normal usage, but PTFE can produce toxic fumes if pyrolyzed. Decomposition is initiated above 300C.

\*\*LD50 (oral, rats): 120mg/kg

\*\*\*Not volatile, though may contain trace quantities of trichlorotrifluoroethane.

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TEL: (852)2577 5187

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<b>IDENTITY</b> (As Used on Label and List)	<b>LAST ACCESSED:</b> 23/07/1996
OMEGA 33	

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Carbon black as thickener	1333-86-4	3.5mg/m3	-
Molybdenum disulfide	1317-33-5	15.0mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	***	<i>Specific Gravity (H2O = 1)</i>	1.02
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Black semi-solid grease, mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
316C	N.A.	-	-

***Extinguishing Media***

Dry chemical, carbon dioxide, foam, sand.

***Special Fire Fighting Procedures***

Fire fighters should wear an approved self contained breathing apparatus.

***Unusual Fire and Explosion Hazards***

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

***Incompatibility (Materials to Avoid)***

Hydrogen peroxide, chromic acid, bromine.

***Hazardous Decomposition or Products***

By open flame: Carbon monoxide, carbon dioxide.

<i>Hazardous</i>	<i>Conditions to Avoid</i>

<i>Polymerization</i> Will Not Occur	None
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**SECTION V - HEALTH HAZARD DATA**

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*Threshold Limit Value*

See section I hazardous ingredients

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*Effects of Overexposure*

May cause skin & eye irritation with prolonged contact.

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*Emergency & First Aid Procedures*

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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*Steps to Be Taken In Case Material Is Released or Spilt*

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

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*Waste Disposal Method*

By methods consistent with local, State and Federal regulations.

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*Precautions to Be Taken in Handling and Storing*

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

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*Other Precautions*

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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*Respiratory Protection (Specify Type)*

None required

<i>Ventilation</i>	<i>Local Exhaust</i> N.A.	<i>Special</i> N.A.
	<i>Mechanical (General)</i> N.A.	<i>Other</i> N.A.

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*Protective Gloves*

Rubber or plastic oil resistant gloves.

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*Eye Protection*

Safety goggles and full face shield.

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*Other Protective Clothing or Equipment*

None required

*Work/Hygienic Practices*

N.A.

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*Remarks*

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IDENTITY (As Used on Label and List)  OMEGA 35	LAST ACCESSED: 23/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components	CAS NO	TLV	Other Limits Recommended
(Specific Chemical Identity: Common Name(s))			
Polyethylene glycol	25322-68-3	-	-
Graphite	7440-44-0	-	*

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	1.34
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (N.A. )	N.A.

Solubility in Water Negligible.

Appearance and Odor Dark grey semi-solid grease.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
C.O.C. above 232C	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke.

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Strong oxidizing agents such as: Hydrogen peroxide, chromic acid, bromine

**Hazardous Decomposition or Products**

Carbon monoxide, carbon dioxide.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

See section I hazardous ingredients.

**Effects of Overexposure**

May cause skin and eye irritation with prolonged contact.

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**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 minutes. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulation.

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**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

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**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed or food products.

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**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Not required.

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Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

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**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required.

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* PEL TWA 3.5mg/m3

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IDENTITY(As Used on Label and List)  OMEGA 51	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	<i>Other Limits</i>
			<i>Recommended</i>
Highly refined mineral oils**	64742-65-0	*5mg/m3	-
Lithium 12-OH stearate as thickener	N.A.	N.A.	-
Polyethylene	9002-88-4	N.A.	-
Molybdenum disulfide	1317-33-5	15.0mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (N.A. )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Moly grey semi-solid grease, mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. 221C	N.A.	-	-

***Extinguishing Media***

Dry chemical, carbon dioxide

***Special Fire Fighting Procedures***

Fire fighters should wear an approved self contained breathing apparatus.

***Unusual Fire and Explosion Hazards***

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

***Incompatibility (Materials to Avoid)***

Hydrogen peroxide, chromic acid, bromine.

***Hazardous Decomposition or Products***

By open flame: Carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY(As Used on Label and List)</b>  OMEGA 57 #1	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Highly refined mineral oils**	64742-65-0	*5mg/m3	-
Aluminium complex as thickener	54326-11-3	-	-
Highly refined mineral oils**	64741-96-4	*5mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.896
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Blue semi-solid grease, mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. above 200C	N.A.	-	-

*Extinguishing Media*

Dry chemical, waterfog, carbon dioxide, foam, sand/earth.

*Special Fire Fighting Procedures*

Dense smoke. Fire fighters should wear an approved self contained breathing apparatus. Do not use water except as fog.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizers such as hydrogen peroxide, chromic acid, bromine.  
  
*Hazardous Decomposition or Products*  
CO and CO2 from burning; oxides of sulfur; SO2/H2S depending upon decomposition conditions

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

*Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

None when used with good personal hygiene practices. May otherwise cause skin & eye irritation upon prolonged or repeated contact.

**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes. Call a physician immediately. Skin Contact: Remove excess with cloth or paper and wash thoroughly with soap and water. For high pressure injection under the skin see a physician immediately. Inhalation: Remove exposed person to fresh air if discomfort is experienced while handling hot product. If Swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required.

**Work/Hygienic Practices**

N.A

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY (As Used on Label and List)</b>  OMEGA 57	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Highly refined mineral oils**	64742-65-0	*5mg/m3	-
Aluminium complex as thickener	54326-11-3	-	-
Highly refined mineral oils **	64741-96-4	*5mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H20 = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Blue semi-solid grease, mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. above 180C	N.A.	-	-

***Extinguishing Media***

Dry chemical, waterfog, carbon dioxide, foam, sand/earth.

***Special Fire Fighting Procedures***

Dense smoke. Fire fighters should wear an approved self contained breathing apparatus. Do not use water except as fog.

***Unusual Fire and Explosion Hazards***

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

***Incompatibility (Materials to Avoid)***

Strong oxidizers such as hydrogen peroxide, chromic acid, bromine.

***Hazardous Decomposition or Products***

CO and CO2 from burning; oxides of sulfur; zinc oxide;  
 SO2/H2S depending upon decomposition conditions

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

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**Effects of Overexposure**

None when used with good personal hygiene practices. May otherwise cause skin & eye irritation upon prolonged or repeated contact.

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**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes. Call a physician immediately. Skin Contact: Remove excess with cloth or paper and wash thoroughly with soap and water. For high pressure injection under the skin see a physician immediately. Inhalation: Remove exposed person to fresh air if discomfort is experienced while handling hot product. If Swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

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**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

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**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

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**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

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**Protective Gloves**

Rubber or plastic oil resistant gloves.

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**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

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N.A.

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**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	<i>Other Limits</i>
			<i>Recommended</i>
White mineral oil	8042-47-5	5mg/m3 *	-
Aluminium complex as thickener	54326-11-3	-	-
Butylated hydroxyl toluene	128-37-0	10 mg/m3	-
Zinc oxide	1314-13-2	5 mg/m3 (TWA)	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* White semi-solid grease, mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> C.O.C. above 149C	<i>Flammable Limits</i> -	<i>LEL</i> N.A.	<i>UEL</i> N.A.
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*Extinguishing Media*

Dry chemical, waterfog, carbon dioxide, foam, sand/earth.

*Special Fire Fighting Procedures*

Dense smoke. Fire fighters should wear an approved self contained breathing apparatus. Do not use water except as fog.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> None
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*Incompatibility (Materials to Avoid)*

Strong oxidizers such as hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

Carbon monoxide and carbon dioxide from burning. Zinc oxide.

<i>Hazardous</i>	<i>Conditions to Avoid</i>
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Polymerization

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

None when used with good personal hygiene practices. May otherwise cause skin and eye irritation upon prolonged or repeated contact.

**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes. Call a physician immediately. Skin contact: Remove excess with cloth or paper and wash thoroughly with soap and water. For high pressure injection under the skin see a physician immediately. Inhalation: Remove exposed person to fresh air if discomfort is experienced while handling hot product. If Swallowed in a large amount: Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed.

**Other Precautions**

Keep out of the reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

**OMEGA MANUFACTURING DIVISION**  
**MAGNA INDUSTRIAL CO. LIMITED**  
 18/F, GUARDIAN HOUSE, HONG KONG.  
**TEL: (852)2577 5187**  
**FAX: (852)2577 3190**

<b>IDENTITY (As Used on Label and List)</b>  OMEGA 59	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Highly refined mineral oils**	64741-96-4	*5mg/m3	-
Bentonite as thickener	68953-58-2	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Gold sparkle semi-solid grease, mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. 249C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

By open flame: Carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hours exposure.

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

18/F, GUARDIAN HOUSE, HONG KONG.

TEL: (852)2577 5187

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IDENTITY(As Used on Label and List)

OMEGA 64

LAST ACCESSED: 24/07/1996

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	64741-96-4	*5mg/m3	-
Lithium 12-OH Stearate as thickener	7620-77-1	-	-
Graphite	7440-44-0	-	***

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Dark brown semi-solid grease, mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. 185C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

By open flame: Carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>



Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346

\*\*\* PEL TWA 3.5mg/m3

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---

**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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FAX: (852)2577 3190

IDENTITY(As Used on Label and List)  OMEGA 65	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	64741-96-4	* 5mg/m3	-
Lithium 12-OH Stearate as thickener	7620-77-1	-	-
Graphite	7440-44-0	-	***

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Dark brown semi-solid grease, mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. >180C	N.A.	-	-

*Extinguishing Media*

Dry chemical, waterfog, carbon dioxide, foam, sand/earth.

*Special Fire Fighting Procedures*

Dense smoke. Fire fighters should wear an approved self contained breathing apparatus. Do not use water except as fog.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizers such as hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

CO and CO2 from burning; oxides of sulfur; oxides of barium; zinc

oxide; SO2/H2S depending upon decomposition conditions

<b>Hazardous</b> <b>Polymerization</b>	<b>Conditions to Avoid</b>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

None when used with good personal hygiene practices. May otherwise cause skin and eye irritation upon prolonged or repeated contact.

**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes and call a physician. Skin Contact: Remove excess with cloth or paper and wash area thoroughly with soap and water. For high pressure injection under the skin see a physician immediately. Inhalation: Remove exposed person to fresh air if discomfort is experienced while handling hot product. If Swallowed: Contact a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

*Other Protective Clothing or Equipment*

None required

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*Work/Hygienic Practices*

N.A.

---

*Remarks*

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

\*\*\* PEL TWA 3.5mg/m<sup>3</sup>

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**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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IDENTITY (As Used on Label and List)  OMEGA 66	LAST ACCESSED: 17/07/1997
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components			Other Limits
Specific Chemical Identity: Common Name(s)	CAS NO	TLV	Recommended
Highly refined mineral oils **	64741-97-5	*5mg/m3	-
Calcium 12-OH stearate as thickener	3159-62-4	-	-
Barium sulfonate	61790-48-5	0.5(Ba)mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (N.A. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate ( )	N.A.

Solubility in Water Negligible

Appearance and Odor Blue semi-solid grease, mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
C.O.C. 149C	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Hydrogen peroxide, chromic acid, bromine.

**Hazardous Decomposition or Products**

By open flame: Carbon monoxide, carbon dioxide.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

threshold Limit Value

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

---

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

---

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately.

Skin contact: Wash thoroughly with soap and water.

Inhalation: N.A.

If swallowed: Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

---

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

---

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

---

**Other Precautions**

Keep out of the reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

None required

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<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

---

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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heir use.

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IDENTITY (As Used on Label and List)  OMEGA 71	LAST ACCESSED: 24/07/1996
--	---------------------------

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Highly refined mineral oils**	64741-96-4	*5mg/m3	-
Bentonite as thickener	68953-58-2	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (N.A. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate ( )	N.A.

Solubility in Water Negligible

Appearance and Odor Gold sparkle semi-solid grease, mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used) C.O.C. 249C	Flammable Limits N.A.	LEL -	UEL -
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**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability Stable	Conditions to Avoid None
---------------------	-----------------------------

**Incompatibility (Materials to Avoid)**

Hydrogen peroxide, chromic acid, bromine.

**Hazardous Decomposition or Products**

By open flame: Carbon monoxide, carbon dioxide.

Hazardous Polymerization Will Not Occur	Conditions to Avoid None
---	-----------------------------

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

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IDENTITY (As Used on Label and List)  OMEGA 73	LAST ACCESSED: 22/10/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	64741-96-4	*5mg/m3	-
Carbon black as thickener	1333-86-4	3.5mg/m3	-
Molybdenum disulfide	1317-33-5	15mg/m3	-
Graphite	7440-44-0	-	***

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	1.0
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Black semi-solid grease, mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> C.O.C. 227C	<i>Flammable Limits</i> N.A.	<i>LEL</i> -	<i>UEL</i> -
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*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> None
----------------------------	------------------------------------

*Incompatibility (Materials to Avoid)*

Hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

By open flame: Carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i> Will Not Occur	<i>Conditions to Avoid</i> None
---	------------------------------------

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extracts as measured by IP 346.
- \*\*\* PEL TWA 3.5mg/m3

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of

their use.

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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IDENTITY (As Used on Label and List) <b>OMEGA 77</b>	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	64741-96-4	*5mg/m3	-
Lithium 12-OH stearate as thickener	7620-77-1	-	-
Highly refined mineral oils**	64742-65-0	*5mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H20 = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water Negligible**Appearance and Odor Red semi-solid grease, mineral oil odor.***SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. above 150C	N.A.	-	-

*Extinguishing Media*

Dry chemical, waterfog, carbon dioxide, foam, sand/earth.

*Special Fire Fighting Procedures*

Dense smoke. Fire fighters should wear as approved self contained breathing apparatus. Do not use water except as fog.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizers such as hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

CO, CO2 &amp; oxides of P from burning; oxides of S&amp;N; ZnO; HCl on burning or decomposition; Chlorocarbons; SO2/H2S depend on decomposition conditions

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

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**Effects of Overexposure**

None when used with good personal hygiene practices. May otherwise cause skin & eye irritation upon prolonged or repeated contact.

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**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes. Call a physician immediately. Skin Contact: Remove excess with cloth or paper and wash thoroughly with soap and water. For high pressure injection under the skin see a physician immediately. Inhalation: Remove exposed person to fresh air if discomfort is experienced while handling hot product. If Swallowed; Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

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**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

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**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

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**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

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**Protective Gloves**

Rubber or plastic oil resistant goggles.

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**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

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IDENTITY (As Used on Label and List)  OMEGA 79	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits
			Recommended
White mineral oil	8042-47-5	*5mg/m3	-
Aluminium complex as thickener	54326-11-3	-	-
Butylated hydroxyl toluene	128-37-0	10mg/m3	-
Zinc oxide	1314-13-2	5mg/m3 (TWA)	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (N.A. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate ( )	N.A.

Solubility in Water Negligible

Appearance and Odor White semi-solid grease, mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
C.O.C. 170C	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Hydrogen peroxide, chromic acid, bromine.

**Hazardous Decomposition or Products**

By open flame: Carbon monoxide, carbon dioxide,

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before reuse. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b> N.A.	<b>Special</b> N.A.
	<b>Mechanical (General)</b> N.A.	<b>Other</b> N.A.

<b>Protective Gloves</b> Rubber or plastic oil resistant gloves.	<b>Eye Protection</b> Safety goggles and full face shield.
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**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

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IDENTITY (As Used on Label and List)  OMEGA 85	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits
			Recommended
Highly refined mineral oils **	64742-52-5	* 5mg/m3	-
Polyurea thickener	-	-	-
Highly refined mineral oils**	64742-65-0	* 5mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.944
Vapor Pressure (N.A. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Royal blue semi-solid grease with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used) C.O.C. > 235C	Flammable Limits N.A.	LEL -	UEL -
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**Extinguishing Media**

Dry chemical, waterfog, carbon dioxide, foam, sand/earth.

**Special Fire Fighting Procedures**

Dense smoke. Fire fighters should wear an approved self-contained breathing apparatus.

Do not use water except as fog.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability Stable	Conditions to Avoid None
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**Incompatibility (Materials to Avoid)**

Strong oxidizers such as hydrogen peroxide, chromic acid, bromine.

**Hazardous Decomposition or Products**

CO, CO2 and oxides of phosphorous from burning; oxides of nitrogen and sulfur; SO2/H2S depend on decomposition conditions; oxides of calcium

Hazardous Polymerization Will Not Occur	Conditions to Avoid  None
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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

None when used with good personal hygiene practices. May otherwise cause skin and eye irritation upon prolonged or repeated contact.

**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes and call a physician. Skin Contact: Remove excess with cloth or paper and wash area thoroughly with soap and water. For high pressure injection under the skin see a physician immediately. Inhalation: Remove exposed person to fresh air if discomfort is experienced while handling hot product. If Swallowed: Contact a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of mixture into another container. Absorb residue with an inert material such as earth, sand, or vermiculite. Sweep up and dispose as solid waste in accordance with local, state, and federal regulations.

**Waste Disposal Method**

Dispose of in accordance with all applicable federal, state and local regulations.

**Precautions to Be Taken in Handling and Storing**

Keep container closed until ready for use. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 95	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>		<i>Other Limits</i>	
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	72623-85-9	*5mg/m3	-
Calcium type thickener	61788-86-4	-	-
Lithium 12-OH stearate as thickener	7620-77-1	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	>1
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Yellow amber semi-solid grease, mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. above 190C	N.A.	-	-

*Extinguishing Media*

Dry chemical, waterfog, carbon dioxide, foam, sand/earth.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents: hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

By open flame: carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	N.A.

**SECTION V - HEALTH HAZARD DATA**

<i>Threshold Limit Value</i>

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

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**Effects of Overexposure**

May cause skin and eye irritation upon prolonged or repeated contact.

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**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

---

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

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**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

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**Other Precautions**

Keep out of the reach of children.

---

**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

Protective Gloves	Eye Protection
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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IDENTITY(As Used on Label and List) OMEGA 99	LAST ACCESSED: 19/04/1999
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components (Specific Chemical Identity: Name(s))</i>	<i>Common</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
Mineral spirits##		8032-32-4	5mg/m3(mist)	*
Zinc oxide		1314-13-2	-	**
Aluminium stearate		637-12-7	-	-
Graphite		7782-42-5	2mg/m3(dust)	-
Highly refined mineral oils***		64742-65-0	5mg/m3(mist)	
Aluminium		7429-90-5	10mg/m3	-
Copper		7440-50-8	-	#

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	1.311
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Silver-bronze color with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. 213C	N.A.	-	-

**Extinguishing Media**

Dry chemical or carbon dioxide. Do not use water.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

**Incompatibility (Materials to Avoid)**

Strong acids, bases, oxidizing agents, chlorinated hydrocarbons & halognate

**Hazardous Decomposition or Products**

\*\*\*\*

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Inhalation: Inhalation of solvent vapors can cause irritation of the respiratory tract. High concentrations of oil mists, sprays or vapors can cause chemical pneumonitis. Inhalation of metal dusts can cause pneumonconiosis of metal-fume fever - however, this is judged unlikely considering the form of the product.

Skin: May cause irritation, drying and cracking.

Eyes: Causes irritation.

Ingestion: May cause irritation and burning pain in mouth and stomach, thirst, nausea, vomiting, diarrhea, with possible collapse if large amounts ingested.

Irritancy of material: A moderate skin, eye and mucus membrane irritant.

Sensitization to material: Contains copper, a potential skin sensitizer.

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**Emergency & First Aid Procedures**

Inhalation: Remove victim to fresh air. If breathing difficult, administer oxygen. If breathing stopped, administer artificial respiration. Call a physician for anything more than slight exposure.

Skin: Wash affected area with soap and water thoroughly. Consult a physician if irritation persists.

Eyes: Flush with running water for 15 minutes, occasionally lifting lids. Consult a physician.

Ingestion: Do not induce vomiting. Rinse out mouth with water. Have victim drink water or milk. Activated charcoal tablets may be administered. Never give anything by mouth to an unconscious person. Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Contain spill. Absorb with inert absorbent such as a dry clay, sand, diatomaceous earth, or commercial sorbents. Scoop up used absorbents and rags into drums for disposal. Do not wash into sanitary sewer.

---

**Waste Disposal Method**

Comply with all federal, provincial and local regulations regarding disposal.

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**Precautions to Be Taken in Handling and Storing**

Handling procedures and equipment: Avoid skin or eye contact. Wash hands thoroughly after handling and before eating. Launder work clothes frequently. Discard saturated leather goods.

Storage requirements: Store in a cool, dry area away from incompatibles. Keep away from heat, sparks and flame.

---

**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shields.

---

**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* LC50 (inhalation, rat) = 3400 ppm/4H, contains less than 0.1% w/w benzene

\*\* LD50 (Oral, rat) = 7950 mg/kg

# TDLo (Oral, rat) = 152 mg/kg

## Contains less than 0.1% w/w benzene

\*\*\* Contains less than 3% DMSO extract as measured by IP 346.

\*\*\*\* Toxic compounds may form on thermal decomposition. Hazardous combustion products: carbon monoxide, carbon dioxide, oxides of sulfur and nitrogen, toxic metal fumes and oxides. Potentially explosive hydrogen and other dangerous gases may be formed on contact with strong acids.

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IDENTITY(As Used on Label and List)

LAST ACCESSED : 19/04/1999

OMEGA 99N

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity : Common Name (s))</i>	<i>CAS NO.</i>	<i>TLV</i>	<i>Recommended</i>
Aluminium	7429-90-5	10mg/m3	-
Aluminium stearate	637-12-7	-	-
Mineral spirits#	8032-32-4	5mg/m3 (mist)	*
Zinc oxide	1314-13-2	-	**
Graphite	7782-42-5	2mg/m3 (dust)	-
Highly refined mineral oils##	64742-65-0	5mg/m3 (mist)	-
Nickel	7440-02-0	1mg/m3	***

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	1.329
<i>Vapor Pressure (N.A.)</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (N.A.)</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Silver-grey paste with faint sweet odor

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
C.O.C. 193C	N.A.	-	-

**Extinguishing Media**

Dry chemical or carbon dioxide. Do not use water.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke. Nickel fume vapor.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

**Incompatibility (Materials to Avoid)**

Strong acids, bases, oxidizing agents, chlorinated hydrocarbon&halogenate

**Hazardous Decomposition or Products**

\*\*\*\*\*

<b>Hazardous Polymerization</b> Will Not Occur	<b>Conditions to Avoid</b> None
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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure. See SECTION I hazardous ingredients.

**Effects of Overexposure**

Inhalation: Inhalation of solvent vapors can cause irritation of the respiratory tract. High concentrations of oils, mists, sprays or vapors can Cause deugal Pneumonitis. Inhalation of metal duress Can Cause Pneumoconiosis of metal June foun-homeun This is adjudged unlikely.

considering the form of the product.

Skin: May cause irritation, drying and cracking.

Eyes: Causes irritation.

Ingestion: May cause irritation and burning pain in mouth and stomach, thirst, nausea, vomiting, diarrhea, with possible collapse if large amounts ingested. Aspiration of material upon vomiting may cause chemical pneumonitis.

**Emergency & First Aid Procedures**

Inhalation: Remove victim to fresh air. If breathing difficult, administer oxygen. If breathing stopped, administer artificial respiration. Call a physician for anything more than slight exposure. Skin: Wash affected area with soap and water thoroughly. Consult a physician if irritation persists. Eyes: Flush with running water for 15 minutes, occasionally lifting lids. Consult a physician. Ingestion: Do not induce vomiting. Rinse out mouth with water. Have victim drink water or milk. Activated charcoal tablets may be administered. Never give anything by mouth to an unconscious person. Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Contain spill. Absorb with inert absorbent such as a dry clay, sand, diatomaceous earth, or commercial sorbents. Scoop up used absorbents and rags into drums for disposal. Do not wash into sanitary sewer.

**Waste Disposal Method**

Comply with all federal, provincial and local regulations regarding disposal.

**Precautions to Be Taken in Handling and Storing**

Handling procedures and equipment: Avoid skin or eye contact. Wash thoroughly after handling and before eating. Launder work clothes frequently. Discard saturated leather goods.

Storage requirements: Store in a cool, dry area away from incompatibles. Keep away from heat, sparks and flame.

**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b> N.A.	<b>Special</b> N.A.
	<b>Mechanical (General)</b> N.A.	<b>Other</b> N.A.

<b>Protective Gloves</b> Rubber or plastic oil resistant gloves.	<b>Eye Protection</b> Safety goggles and full face shield.
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<b>Other Protective Clothing or Equipment</b> Oil resistant apron or coverall and impervious footwear.
---

<b>Work/Hygienic Practices</b> N.A.
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**Remarks**

\* LC50 (inhalation, rat)= 3400 ppm/4H

\*\* LD50 (Oral, rat) = 7950 mg/kg

\*\*\* LD50 (Oral, rat) = >5000 mg/kg

\*\*\*\* Toxic compounds may form on thermal decomposition. Hazardous combustion products: toxic nickel carbonyl may form during fires; also, carbon monoxide, carbon dioxide, oxides of sulfur and nitrogen, toxic metal fumes and oxides.

# Contains less than 0.1% W/W benzene.

## Contains less than 3% DMSO extract as measured by IP 346.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

**MATERIAL SAFETY DATA SHEET**

**DELTA DIVISION**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

**MAGNA INDUSTRIAL CO. LIMITED**  
**18/F, GUARDIAN HOUSE, HONG KONG.**  
**TEL: (852)2577 5187**  
**FAX: (852)2577 3190**

<b>IDENTITY(As Used on Label and List)</b>	<b>LAST ACCESSED : 25/07/1996</b>
<b>OMEGA EBONYFINE</b>	

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO.</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity : Common Name (s))			
Highly refined Mineral Oils**	64742-65-0	5mg/m3 *	-
Molybdenum disulfide	1317-33-5	15.0mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling PointC</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm hg)</i>	N.A.	<i>Melting Point</i>	N.A.
<i>vpor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Black colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C	N.A.	-	-

*Extinguishing Media*

Drychemical carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	N.A.

*Incompatibility (Materials to Avoid)*

Extreme Heat - Strong oxidizing agents.

*Hazardous Decomposition or Products*

By open flame : Dense smoke, carbon dioxide, carbon monoxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	N.A.

**SECTION V - HEALTH HAZARD DATA**

*Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

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**Effects of Overexposure**

Mild skin irritation.

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**Emergency & First Aid Procedures**

Eyes : Flush with water for 15 minutes. skin contact : Wash with water.

Inhalation : N.A. If swallowed : Do not induce vomiting, call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Ventilate area - Remove all sources of combustion, transfer bulk of material to another container, treat residue with proper absorbent.

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**Waste Disposal Method**

Send to an approved disposal site or burn in accordance with State and local regulations.

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**Precautions to Be Taken in Handling and Storing**

Use non-sparking tools, keep in cool, dry area. Keep container tightly sealed when not in use.

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**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

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**Protective Gloves**

Plastic or rubber oil resistant gloves.

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**Eye Protection**

Safety goggles and full face shield.

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**Other Protective clothing or Equipment**

N.A.

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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IDENTITY (As Used on Label and List)  OMEGA 510	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components <i>(Specific Chemical Identity: Common Name(s))</i>	CAS NO	TLV	Other Limits Recommended
Highly refined Mineral Oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (N.A. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate ( )	N.A.

Solubility in Water Negligible

Appearance and Odor Amber colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used) Above 100C	Flammable Limits N.A.	LEL -	UEL -
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**Extinguishing Media**

Dry chemical, carbon dioxide( foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability Stable	Conditions to Avoid Avoid breathing oil mist.
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**Incompatibility (Materials to Avoid)**

Avoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Of combustion, fumes, smoke, carbon dioxide.

Hazardous Polymerization Will Not Occur	Conditions to Avoid Avoid breathing oil mist.
---	--

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro - intestinal irritation, nausea, vomiting, diarrhea.

---

**Emergency & First Aid Procedures**

In Eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. if swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into container.

---

**Waste Disposal Method**

Small spill - Destroy by incineration.

Large spill - Destroy by liquid incineration with off-gas scrubber.

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**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face field.

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**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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IDENTITY (As Used on Label and List)  OMEGA 580	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits
			Recommended
Oil 350 White	8042-47-5	*5mg/m3	-
Butylated hydroxy toluene	128-37-0	10mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.888
Vapor Pressure (N.A. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate ( )	N.A.

Solubility in Water Negligible

Appearance and Odor Light clear yellow liquid

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
216C	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Hydrogen peroxide, chromic acid, bromine.

**Hazardous Decomposition or Products**

By open flame: Carbon monoxide, carbon dioxide.

Hazardous	Conditions to Avoid

Polymerization

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before reuse.

**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

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IDENTITY (As Used on Label and List)  OMEGA 585	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Synthetic polyalphaolefin	68037-01-4	5mg/m3 *	-
Synthetic polybutene	9003-29-6	5mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.852
<i>Vapor Pressure (mm Hg )</i>	<1	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Insoluble in water*Appearance and Odor* Off-white color**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
210C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Water to cool exposed containers.

*Unusual Fire and Explosion Hazards*

Dense smoke.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agent: Hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

By open flame: Carbon monoxide, carbon dioxide

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Swallowed: If person is conscious, give water or milk. Ingestion or vomiting may result in its aspiration which may cause pneumonitis. Eye:

May cause moderate eye irritation. Skin: Prolonged or frequent contact may cause irritation or skin cracking. Inhaled: Vapour or mist at concentrations exceeding OSHA TLV may be irritating to the respiratory tract.

**Emergency & First Aid Procedures**

Swallowed: Do not induce vomiting. Aspiration of the fluid may cause lung injury (pneumonitis). Call a physician immediately. Eye: Flush eyes with water at least for 15 minutes with eyelids open. Skin: Wash thoroughly with soap and water. Inhaled: If respiratory irritation occurs move person to fresh air. If irritation continues call a physician.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer spilt product into another container. Absorb remaining residue with absorbents. e.g. sand, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use.

**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.
<b>Protective Gloves</b>	<b>Eye Protection</b>	
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.	



*Other Protective Clothing or Equipment*

None required.

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*Work/Hygienic Practices*

N.A.

---

*Remarks*

\* TLV for oil mist.

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**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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TEL: (852)2577 5187

FAX: (852)2577 3190

IDENTITY (As Used on Label and List)  OMEGA 601	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (N.A. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate ( )	N.A.

Solubility in Water Negligible

Appearance and Odor Amber colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
About 100C	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	Avoid breathing oil mist.

**Incompatibility (Materials to Avoid)**

Avoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Of combustion, fumes, smoke, carbon dioxide.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	Avoid breathing oil mist.

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In Eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If swallowed - Call a physician immediately.

---

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil, to salvage tank. Use sand or absorbent on remaining oil and shovel into container.

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

N.A.

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY(As Used on Label and List)</b>  OMEGA 603	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> <i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
Highly refined mineral oils**	64742-65-0	5mg/m3*	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Amber colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> Above 100C	<i>Flammable Limits</i> N.A.	<i>LEL</i> -	<i>UEL</i> -
--	---------------------------------	-----------------	-----------------

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> None
----------------------------	------------------------------------

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion, fumes, smoke, carbon dioxide.

<i>Hazardous Polymerization</i> Will Not Occur	<i>Conditions to Avoid</i> None
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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee for any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

18/F, GUARDIAN HOUSE, HONG KONG.

TEL: (852)2577 5187

FAX: (852)2577 3190

<b>IDENTITY</b> (As Used on Label and List)  OMEGA 604	<b>LAST ACCESSED:</b> 25/09/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	<i>Other Limits</i>
			Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Amber colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion may form toxic compounds. Carbon monoxide, carbon dioxide, sulphur compounds and fumes.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None



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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration.

Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face field.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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**OMEGA MANUFACTURING DIVISION**  
**MAGNA INDUSTRIAL CO. LIMITED**  
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 TEL: (852)2577 5187  
 FAX: (852)2577 3190

<b>IDENTITY</b> (As Used on Label and List)  OMEGA 605	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>Other Limits</i>		
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H20 = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water Negligible*

*Appearance and Odor Amber liquid with mineral oil odor.*

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C	N.A.	-	-

***Extinguishing Media***

Dry chemical, carbon dioxide, foam, sand.

***Special Fire Fighting Procedures***

Fire fighters should wear an approved self contained breathing apparatus.

***Unusual Fire and Explosion Hazards***

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

***Incompatibility (Materials to Avoid)***

Avoid contact with strong oxidizing agents.

***Hazardous Decomposition or Products***

Of combustion, fumes, smoke, carbon dioxide.

<i>Hazardous</i>	<i>Conditions to Avoid</i>
Polymerization	

Will Not Occur

None

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If swallowed - Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

*Work/Hygienic Practices*

N.A.

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*Remarks*

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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---

**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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FAX: (852)2577 3190

IDENTITY(As Used on Label and List)

OMEGA 606

LAST ACCESSED: 24/07/1996

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION***Hazardous Components**Other Limits**(Specific Chemical Identity: Common Name(s))*

CAS NO

TLV

*Recommended*

Highly refined mineral oil\*\*

64742-65-0

5mg/m3 \*

-

**SECTION II - PHYSICAL CHARACTERISTICS***Boiling Point*

N.A.

*Specific Gravity (H2O = 1)*

0.9

*Vapor Pressure (mm Hg )*

N.A.

*Melting Point*

N.A.

*Vapor Density (AIR = 1)*

N.A.

*Evaporation Rate (- )*

N.A.

*Solubility in Water* Negligible*Appearance and Odor* Red colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA***Flash Point (Method Used)*

Above 100C (PMCC)

*Flammable Limits*

N.A.

*LEL*

-

*UEL*

-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, waterfog, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA***Stability*

Stable

*Conditions to Avoid*

None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion: fumes, smoke, carbon dioxide.

*Hazardous**Polymerization*

Will Not Occur

*Conditions to Avoid*

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On Skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If Swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into container.

**Waste Disposal Method**

Small spill - Destroy by incineration  
Large spill - Destroy by liquid incineration with off gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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OMEGA MANUFACTURING DIVISION

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<b>IDENTITY</b> (As Used on Label and List)	<b>LAST ACCESSED:</b> 24/07/1996
OMEGA 608	

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (N.A. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate ( )</i>	N.A.

*Solubility in Water Negligible**Appearance and Odor Amber colored liquid with mineral oil odor.***SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion may form toxic compounds. Carbon monoxide, carbon dioxide, sulphur compounds and fumes.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritating subsides. On skin - thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration.

Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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---

**MATERIAL SAFETY DATA SHEET**

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**IDENTITY**(As Used on Label and List)

LAST ACCESSED : 13/05/1999

OMEGA 609

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity : Common Name (s))</i>	<i>CAS NO.</i>	<i>TLV</i>	<i>Recommended</i>
Technical white oil	8042-47-5	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	>250C	<i>Specific Gravity (H2O = 1)</i>	0.87
<i>Vapor Pressure (mmHg @25C)</i>	<0.01	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (-)</i>	N.A.

*Solubility in Water* < 0.1g/l

*Appearance and Odor* Near water white color

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
198C		N.A.	N.A.

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agent: Hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

Incomplete combustion and high temperature thermal decomposition promote oxides of carbon, nitrogen, sulfur and phosphorus.

<i>Hazardous</i>	<i>Conditions to Avoid</i>

*Polymerization*

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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*Threshold Limit Value*

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

*Effects of Overexposure*

Swallowed: No effect expected if small amount is swallowed. If swallowed and the person is conscious give water or milk.

Eye: May cause minor eye irritation.

Skin: Prolonged or frequent contact may cause skin irritation or cracking.

Inhaled: Vapor or mist at concentrations exceeding ACGIH TLV may be irritating to the respiratory tract.

*Emergency & First Aid Procedures*

Swallowed: Consult a doctor if a large amount is swallowed.

Eye: Rinse eyes immediately with water for at least 15 minutes. In case of irritation, seek medical advice.

Skin: Wash affected areas with soap and water. Do not use solvents.

Inhaled: Unlikely with this product. If respiratory irritation occurs move the person to fresh air. If irritation continues call a doctor.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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*Steps to Be Taken In Case Material Is Released or Spilt*

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

*Waste Disposal Method*

By methods consistent with local, State and Federal regulations.

*Precautions to Be Taken in Handling and Storing*

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before reuse.

*Other Precautions*

Keep out of the reach of children.

---

**SECTION VII - CONTROL MEASURES**

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*Respiratory Protection (Specify Type)*

None required.

<i>Ventilation</i>	<i>Local Exhaust</i>	<i>Special</i>
	N.A.	N.A.
	<i>Mechanical (General)</i>	<i>Other</i>

N.A.

N.A.

---

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required.

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**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist.

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---

**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

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<b>IDENTITY</b> (As Used on Label and List)	<b>LAST ACCESSED:</b> 24/07/1996
OMEGA 611	

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Naphthenic highly refined mineral oil**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.898
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Green fluoro colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C (PMCC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion, fumes, smoke, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritating subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into container.

**Waste Disposal Method**

Small Spill - Destroy by incineration.

Large Spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist



\*\* Contains less than 3% DMSO extract as measured by IP 346.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee for any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

18/F, GUARDIAN HOUSE, HONG KONG.

TEL: (852)2577 5187

FAX: (852)2577 3190

IDENTITY (As Used on Label and List)	LAST ACCESSED: 24/07/1996
OMEGA 612	

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components	CAS NO	TLV	Other Limits
(Specific Chemical Identity: Common Name(s))			Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Amber liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Above 100C (PMCC)	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Avoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Of combustion, fumes, smoke, carbon dioxide.

Hazardous	Conditions to Avoid
Polymerization	
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In-eyes - Flush with excess water until irritating subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If Swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbents on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration.

Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

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\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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IDENTITY (As Used on Label and List)  OMEGA 613	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Amber liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Above 100C (PMCC)	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Avoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Of combustion: fumes, smoke, carbon dioxide.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If Swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

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\* TLV for mineral oil mist

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IDENTITY (As Used on Label and List)  OMEGA 615	LAST ACCESSED: 03/06/1997
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Synthetic polyalphaolefin	68037-01-4	5mg/m3 *	N.A.

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	> 250C	<i>Specific Gravity (H2O = 1)</i>	0.84
<i>Vapor Pressure (mm Hg. )</i>	<0.01 @25C	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Off-white liquid.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
> 200C		N.A.	N.A.

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

None expected. Autoignition temperature is in excess of 250C.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents: hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

Incomplete combustion and high temperature thermal decomposition may promote oxides of carbon, nitrogen, sulfur and phosphorus.

<i>Hazardous</i>	<i>Conditions to Avoid</i>
Polymerization	



Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

swallowed : If swallowed and the person is conscious give water or milk. Ingestion or subsequent vomiting may result in its aspiration which could cause pneumonitis.

Eye : May cause moderate eye irritation.

Skin : Prolonged or frequent contact may cause skin irritation or cracking.

Inhaled : Vapour or mist at concentrations exceeding TLV may be irritating to be respiratory tract.

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**Emergency & First Aid Procedures**

Swallowed : Do not induce vomiting. Aspiration of fluid may cause lung injury (pneumonitis). Call a physician immediately.

Eye : Rinse eyes immediately with water for at least 15 minutes. In case of irritation seek medical advice.

Skin : Wash affected areas with soap and water. Do not use solvents.

Inhaled : If respiratory irritation occurs move the person to fresh air. If irritation continues, call a physician.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Prevent entry into sewers and waterways, product may be slippery.

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**Waste Disposal Method**

Dispose of as per local regulations.

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**Precautions to Be Taken in Handling and Storing**

As a precaution keep away from strong oxidising agents and sources of heat or ignition. Keep containers tightly closed when not in use. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before reuse.

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**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

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<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>

---

N.A.

N.A.

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**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* TLV for oil mist.

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OMEGA MANUFACTURING DIVISION

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IDENTITY (As Used on Label and List)  OMEGA 630	LAST ACCESSED: 09/06/1998
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oil**	64742-65-0	5mg/m3 *	-
Distillates (petroleum), hydrotreated light	64742-47-8	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Purple colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 80C (PMCC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion: Fumes, smoke, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - Can cause irritation. Skin - Prolonged or repeated contact can cause moderate irritation. Swallowing - Can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill at source, use dike to retain and pull oil to salvage tank. Use sand or - Exclude persons from area not wearing protective equipment. Stop spill absorbent on remaining oil and shovel into container.

**Waste Disposal Method**

Small spill - Destroy by incineration.

Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mists.

<i>Ventilation</i>	<i>Local Exhaust</i>	<i>Special</i>
	N.A.	N.A.
	<i>Mechanical (General)</i>	<i>Other</i>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

*Work/Hygienic Practices*

N.A.

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*Remarks*

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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OMEGA MANUFACTURING DIVISION

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IDENTITY(As Used on Label and List)  OMEGA 631	LAST ACCESSED: 24/07/1996
--	---------------------------

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Red fluoro colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Above 100C (PMCC)	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Avoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Of combustion, fumes, smoke, carbon dioxide.

Hazardous	Conditions to Avoid
polymerization	
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastroin-testinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water, Remove clothing and launder clothing before reuse. If Swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration  
Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

Protective Gloves	Eye Protection
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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IDENTITY (As Used on Label and List)  OMEGA 636	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits
			Recommended
White spirits#	64742-82-1	5mg/m3 *	
Highly refined mineral oil**	64742-65-0	5mg/m3 *	-
Butyl cellosolve	111-76-2	25ppm	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	145C	Specific Gravity (H2O = 1)	0.843
Vapor Pressure (mm Hg. )	1	Melting Point	N.A.
Vapor Density (AIR = 1)	Heavier	Evaporation Rate (Ether=1)	<1

Solubility in Water Insoluble

Appearance and Odor Green oil liquid with white spirit type odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
52C		-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, flames, and other ignition sources at locations distant from handling point.

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Strong oxidizing agents: hydrogen peroxide, chromic acid, bromine.

**Hazardous Decomposition or Products**

Carbon monoxide, carbon dioxide.

<i>Hazardous</i>	<i>Conditions to Avoid</i>
<i>Polymerization</i>	
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

*Threshold Limit Value*

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

*Effects of Overexposure*

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - Can cause gastro-intestinal irritation, nausea, vomiting or diarrhea.

*Emergency & First Aid Procedures*

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

*Steps to Be Taken In Case Material Is Released or Spilt*

Eliminate all ignition source. Small spill - absorb on paper, absorbent and move to hood. Allow to evaporate. Large spill - Exclude person from area not wearing protective equipment. Stop spill at source dike to retain spill, pump oil to salvage tank. Use on remaining oil.

*Waste Disposal Method*

Small spill - Allow volatile portion to evaporate in hood. Allow sufficient time for vapors to completely clear hood duct work. Destroy remaining material by burning in an iron pan.

*Precautions to Be Taken in Handling and Storing*

Keep containers closed when not in use. Keep away from heat, fire and ignition sources.

*Other Precautions*

Avoid eye contact, repeated or prolonged skin contact wear impervious clothing.

**SECTION VII - CONTROL MEASURES**

*Respiratory Protection (Specify Type)*

If TLV of material exceeded, use self-contained breathing apparatus with full facepiece on pressure demand.

<i>Ventilation</i>	<i>Local Exhaust</i>	<i>Special</i>
	Required	Usually not needed in open.
	<i>Mechanical (General)</i>	<i>Other</i>
	Ventilation may be restricted.	unconfined space.

<i>Protective Gloves</i>	<i>Eye Protection</i>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

*Other Protective Clothing or Equipment*

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

# Contains less than 0.1% w/w benzene.

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**MATERIAL SAFETY DATA SHEET**

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IDENTITY (As Used on Label and List)  OMEGA 640	LAST ACCESSED: 15/06/1998
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Highly refined mineral oil**	64742-65-0	5mg/m3 *	-
Distillates (petroleum), hydrotreated light	64742-47-8	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Purple colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 80C (PMCC)	N.A.	-	-

***Extinguishing Media***

Dry chemical, carbon dioxide, foam, sand.

***Special Fire Fighting Procedures***

Fire fighters should wear an approved self contained breathing apparatus.

***Unusual Fire and Explosion Hazards***

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

***Incompatibility (Materials to Avoid)***

Avoid contact with strong oxidizing agents.

***Hazardous Decomposition or Products***

Of combustion, fumes of smoke, carbon dioxide & monoxide may evolved.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro - intestinal irritation, nausea, vomiting or diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder before re-use. If swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank.

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged or repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* contains less than 3% DMSO extract as measured by IP 346.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee for any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

18/F, GUARDIAN HOUSE, HONG KONG.

TEL: (852)2577 5187

FAX: (852)2577 3190

IDENTITY (As Used on Label and List)	LAST ACCESSED: 24/07/1996
OMEGA 643	

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components	CAS NO	TLV	Other Limits Recommended
(Specific Chemical Identity: Common Name(s))			
Highly refined mineral oils**	64742-65-0	5mg/m3 *	

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Amber colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Above 100C (PMCC)	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Avoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Of combustion, fumes of carbon dioxide &amp; monoxide may evolved.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - Prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting and diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder before re-use. If swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration.

Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<i>Ventilation</i>	<i>Local Exhaust</i>	<i>Special</i>
	N.A.	N.A.
	<i>Mechanical (General)</i>	<i>Other</i>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None requiredNone required

**Work/Hygienic Practices**

N.A.

**Remarks**

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\*\* TLV for mineral oil mist

\*\* contains less than 3% DMSO extract as measured by IP 346.

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OMEGA 646

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO.</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity : Common Name (s))			
Molybdenum disulfide	1317-35-5	15.0 mg/m3	-
Highly refined mineral oil**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H20 = 1)</i>	0.9
<i>Vapor Pressure (N.A.)</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate(-)</i>	N.A.
<i>Solubility in Water</i> Negligible			
<i>Appearance and Odor</i> Dark grey liquid with mineral oil odor.			

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C (PMCC)	N.A.	-	-
<i>Extinguishing Media</i>			
Dry chemical, carbon dioxide, foam, sand.			
<i>Special Fire Fighting Procedures</i>			
Fire fighters should wear an approved self contained breathing apparatus.			
<i>Unusual Fire and Explosion Hazards</i>			
Dense smoke			

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None
<i>Incompatibility (Materials to Avoid)</i>	
Strong oxidizing agents.	
<i>Hazardous Decomposition or Products</i>	
Dense Smoke, carbon monoxide, carbon dioxide.	
<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

See section I hazardous ingredients.

**Effects of Overexposure**

Mild skin irritation.

**Emergency & First Aid Procedures**

Eyes: Flush with large amount of water for at least 15 minutes.

Skin Contact: Wash thoroughly with soap and water.

Inhalation: N.A.

If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Ventilate area - remove all sources of combustion - transfer bulk of material to another container - treat residue with proper absorbent.

**Waste Disposal Method**

Send to an approved disposal site or burn in accordance with State and local regulations.

**Precautions to Be Taken in Handling and Storing**

Keep in a cool, dry area.

Keep container tightly sealed when not in use.

**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full faceshield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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OMEGA 647

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO.</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity : Common Name (s))			
Molybdenum disulfide	1317-35-5	15.0 mg/m3	-
Synthetic Polybutenes	9003-28-50	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.88
<i>Vapor Pressure (Hg mm)</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (-)</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Dark grey liquid

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
171C C.O.C.	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Extreme heat - Strong oxidizing agents.

*Hazardous Decomposition or Products*

By open flame : Carbon monoxide, carbon dioxide and dense smoke.

<i>Hazardous</i>	<i>Conditions to Avoid</i>
Polymerization	

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

See section I hazardous ingredient.

---

**Effects of Overexposure**

Mild skin irritant.

---

**Emergency & First Aid Procedures**

Eyes : Flush with water for at least 15 min.

Skin contact : Wash with water.

Inhalation : N.A.

If swallowed : Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material to another container, pick up residue with proper absorbent.

---

**Waste Disposal Method**

In accordance with local regulations for lubricating oil waste.

---

**Precautions to Be Taken in Handling and Storing**

Keep in cool dry place.

---

**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

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**Protective Gloves**

Rubber or plastic oil resistant gloves.

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**Eye Protection**

Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist.

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OMEGA 648

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components	Other Limits		
(Specific Chemical Identity : Common Name (s))	CAS NO.	TLV	Recommended
-	-	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	>200C	Specific Gravity (H2O = 1)	0.97
Vapor Pressure (Hg mm)	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (-)	N.A.

Solubility in Water Negligible

Appearance and odor Clear yellow liquid with mild odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
>250C	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, and sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Strong oxidizing agents: hydrogen peroxide, chromic acid and bromine.

**Hazardous Decomposition or Products**

By open flame: Carbon monoxide, carbon dioxide.

Hazardous Polymerization	Conditions to Avoid



Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

See section I hazardous ingredient.

**Effects of Overexposure**

Swallowed: Ingestion or vomiting may result in its aspiration, which may cause pneumonitis.

Eye: May cause moderate eye irritation.

Skin: Prolonged or frequent contact may cause irritation or skin cracking.

Inhaled: Vapor or mist at high concentration may be irritating to the respiratory tract.

**Emergency & First Aid Procedures**

Eye: Flush with water for at least 15 min.

Skin contact: Wash with water.

Inhalation: If respiratory irritation occurs move person to fresh air. If irritation continues call a doctor.

If swallowed: Do not induce vomiting. Aspiration of the fluid may cause lung injury (pneumonitis). Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material to another container, pick up residue with proper absorbent.

**Waste Disposal Method**

This product is not considered dangerous or poisonous. Dispose of according to local and national regulations.

**Precautions to Be Taken in Handling and Storing**

Keep in cool dry place.

**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

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**MATERIAL SAFETY DATA SHEET**

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IDENTITY (As Used on Label and List)  OMEGA 656	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Diethanolamine	111-42-2	-	-
Diethylene glycol monoethyl ether	111-90-0	-	-
Triethanolamine	102-71-6	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	>100C	<i>Specific Gravity (H2O = 1)</i>	1.02
<i>Vapor Pressure (- )</i>	-	<i>Melting Point</i>	-
<i>Vapor Density (AIR = 1)</i>	-	<i>Evaporation Rate (- )</i>	-

*Solubility in Water* Soluble*Appearance and Odor* Fluorescent yellow with no unpleasant odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
None		-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

None

*Unusual Fire and Explosion Hazards*

Dense smoke.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	Extremely high temperatures, nitrosating agents.

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents.

*Hazardous Decomposition or Products*

Harmful vapors may be produced upon burning.

<i>Hazardous</i>	<i>Conditions to Avoid</i>
Polymerization	

Will Not Occur

None

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

See Section I hazardous ingredients.

**Effects of Overexposure**

Eyes - Prolonged contact can cause severe irritation.

Skin - Prolonged contact can cause mild irritation.

Inhalation - Can cause irritation.

**Emergency & First Aid Procedures**

Eyes - Flush with large amount of water for at least 15 minutes. Consult physician.

Skin - Wash affected area with soap and water. If irritation persists, consult physician.

**Ingestion - Call physician immediately.**

Inhalation - Remove to fresh air. If necessary, give oxygen, artificial respiration. Consult physician.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Use a sweeping compound to contain spills. Then shovel up the sweeping compound and dispose of via normal garbage or waste disposal. Rinse contaminated area with water.

**Waste Disposal Method**

By method consistent with local, Status, Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use.

**Other Precautions**

Keep out of the reach of children. Do not store at extremely high temperatures.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

N.A.=Not Applicable

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OMEGA 657

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO.</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity : Common Name (s))			
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg.)</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (-)</i>	N.A.

*Solubility in Water* Negligible

*Appearance and odor* Amber colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C (PMCC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong Oxidizing agents.

*Hazardous Decomposition or Products*

By open flame: Dense smoke, carbon monoxide, carbon dioxide

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Mild skin irritation.

**Emergency & First Aid Procedures**

Eyes: Flush with large amount of water for at least 15 minutes.

Skin contact: Wash thoroughly with soap and water.

Inhalation: N.A.

If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Ventilate area - remove all sources of combustion - transfer bulk of material to another container - treat residue with proper absorbent.

**Waste Disposal Method**

Send to an approved disposal site or burn in accordance with State and local Regulations.

**Precautions to Be Taken in Handling and Storing**

Keep in a cool, dry area.

Keep container tightly sealed when not in use.

**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

18/F, GUARDIAN HOUSE, HONG KONG.

TEL: (852)2577 5187

FAX: (852)2577 3190

**IDENTITY** (As Used on Label and List)

LAST ACCESSED : 16/10/1998

OMEGA 658

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity : Common Name (s))</i>	<i>CAS NO.</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	64742-53-6	5.0 mg/m3 *	-
Diethanolamine	111-42-2	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	>200C	<i>Specific Gravity (H2O = 1)</i>	0.90
<i>Vapor Pressure (mm Hg.)</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (Ether=1)</i>	<1

*Solubility in Water* Miscible

*Appearance and Odor* Dark amber liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
174C, C.O.C.	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

None

*Hazardous Decomposition or Products*

Toxic vapors may be produced upon burning.

<i>Hazardous</i>	<i>Conditions to Avoid</i>
Polymerization	

Will Not Occur | None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

Harmful if swallowed or absorbed through skin. Causes mild skin irritation. May cause severe irritation to eyes.

**Emergency & First Aid Procedures**

Eyes - Flush with large amount of water, get medical attention.

Internal - Do not induce vomiting, send for physician.

External - Wash affected area with soap and water.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Use a sweeping compound to contain spills. Then shovel up the sweeping compound and dispose of via normal garbage or waste disposal. Rinse contaminated area with water.

**Waste Disposal Method**

Dispose of in accordance with local and national regulations.

**Precautions to Be Taken in Handling and Storing**

Store between 5C & 32C. Avoid contact with eyes, skin or clothing. Keeping away from children.

**Other Precautions**

Do not store at extreme temperature. Keep from freezing.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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IDENTITY (As Used on Label and List)

OMEGA 659

LAST ACCESSED: 17/06/1997

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION***Hazardous Components**Other Limits**(Specific Chemical Identity: Common Name(s))*

CAS NO

TLV

Recommended

Medicinal paraffin oil

8042-47-5

\*5mg/m3

-

N'N-Bis (2-Hydroxy ethyl) lauramide

120-40-1

-

-

**SECTION II - PHYSICAL CHARACTERISTICS***Boiling Point*

&gt;250C

*Specific Gravity (H2O = 1)*

0.885

*Vapor Pressure (mm Hg @25C)*

&lt;1

*Melting Point*

N.A.

*Vapor Density (AIR = 1)*

N.A.

*Evaporation Rate (- )*

N.A.

*Solubility in Water* Miscible*Appearance and Odor* Off-white colored oil**SECTION III - FIRE AND EXPLOSION HAZARD DATA***Flash Point (Method Used)*

&gt;150C

*Flammable Limits*

LEL

N.A.

UEL

N.A.

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA***Stability*

Stable

*Conditions to Avoid*

None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents: Hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

Incomplete combustion and high temperature thermal decomposition may promote oxides of carbon, nitrogen, sulfur and phosphorus.

*Hazardous**Conditions to Avoid*

Polymerization

Will Not Occur

None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

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---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By method consistent with local, State and Federal regulation.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

---

---

**SECTION VII - CONTROL MEASURES**

---

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

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IDENTITY (As Used on Label and List)  OMEGA 660	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components		Other Limits	
(Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Recommended
Highly refined mineral oil**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Amber colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Above 100C (PMCC)	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Avoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Of combustion, fumes, smoke &amp; carbon dioxide may evolved.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - irritation, nausea, vomiting, diarrhea.

---

**Emergency & First Aid Procedures**

In eyes - flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder before re-use. If swallowed - Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

---

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist  
\*\* contains less than 3% DMSO extract as measured by IP 346.  
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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 670	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
( <i>Specific Chemical Identity: Common Name(s)</i> ) Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Amber liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C (PMCC)	N.A.	-	-

***Extinguishing Media***

Dry chemical, carbon dioxide, foam, sand.

***Special Fire Fighting Procedures***

Fire fighters should wear an approved self contained breathing apparatus.

***Unusual Fire and Explosion Hazards***

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

***Incompatibility (Materials to Avoid)***

Avoid contact with strong oxidizing agents.

***Hazardous Decomposition or Products***

Of combustion, fumes, smoke & carbon dioxide may evolved.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA*****Threshold Limit Value***

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

***Effects of Overexposure***

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

---

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder before re-use. If swallowed - Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

---

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

Protective Gloves	Eye Protection
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

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IDENTITY (As Used on Label and List)  OMEGA 680	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits
			Recommended
Highly refined mineral oil**	64742-65-0	5mg/m3 *	-
Molybdenum disulfide	1317-35-5	15.0mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Black colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used) Above 100C (PMCC)	Flammable Limits N.A.	LEL -	UEL -
--	--------------------------	----------	----------

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability Stable	Conditions to Avoid None
---------------------	-----------------------------

**Incompatibility (Materials to Avoid)**

Extreme heat - strong oxidizing agents.

**Hazardous Decomposition or Products**

Dense smoke - carbon monoxide - carbon dioxide.

Hazardous Polymerization Will Not Occur	Conditions to Avoid None
---	-----------------------------

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

See section I hazardous ingredient.

---

**Effects of Overexposure**

Mild skin irritation.

---

**Emergency & First Aid Procedures**

Eyes: Flush with water for 15 minutes.

Skin contact: Wash with water.

Inhalation: N.A.

If swallowed: Do not induce vomiting. Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Ventilate area - remove all sources of combustion - transfer bulk of material to another container - treat residue with proper absorbent.

---

**Waste Disposal Method**

Send to an approved disposal site or burn in accordance with State and local Regulations.

---

**Precautions to Be Taken in Handling and Storing**

Use non-sparking tools - keep in a cool, dry area.

Keep container tightly sealed when not in use.

---

**Other Precautions**

Keep out of reach of children.

---

**SECTION VII - CONTROL MEASURE**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

---

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

---

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

\*\* contains less than 3% DMSO extract as measured by IP 346.

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IDENTITY(As Used on Label and List)	LAST ACCESSED : 23/7/1996
OMEGA 690	

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components	Other Limits		
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and odor Red colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Above 100C (PMCC)	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke.

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Avavoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Of combustion; May form toxic materials, carbon monoxide, carbon dioxide

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can

cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhoea.

---

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder before reuse. If swallowed - Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper or absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

---

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gass scrubber.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

---

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

---

**Protective Gloves**

Rubber or plastic.

**Eye Protection**

Safety goggles.

---

**Other Protective Clothing or Equipment**

None required.

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

\*\* contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA690 75W90	<b>LAST ACCESSED:</b> 18/12/1998
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-
Polyalphaolefin	68037-01-4	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.903
<i>Vapor Pressure (mm Hg )</i>	@25C <1	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Red liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
>150C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, and sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self-contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents: hydrogen peroxide, chromic acid, and bromine.

*Hazardous Decomposition or Products*

By open flame : carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	N.A.

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for oil mist is 5mg/m3 for a daily 8-hour exposure.



**Effects of Overexposure**

Swallowed : Ingestion or vomiting may result in its aspiration, which may cause pneumonitis.

Eye : May cause moderate eye irritation.

Skin : Prolonged or frequent contact may cause irritation or skin cracking.

Inhaled : Vapour or mist at concentration exceeding TLV may be irritating to the respiratory tract.

**Emergency & First Aid Procedures**

Swallowed : Do not induce vomiting. Aspiration of the fluid may cause lung injury (pneumonitis). Call a doctor immediately.

Eye : Flush eyes with water at least for 15 minutes with eyelids open.

Skin : Wash thoroughly with soap and water.

Inhaled : If respiratory irritation occurs move person to fresh air. If irritation continues call a doctor.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer spilt product into another container. Absorb remaining residue with absorbents. e.g. sand, vermiculite.

**Waste Disposal Method**

The product is not considered dangerous or poisonous. Dispose of according to local and national regulations.

**Precautions to Be Taken in Handling and Storing**

Keep container closed. Keep away from feed and food products.

**Other Precautions**

Keep out of reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee for any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

18/F, GUARDIAN HOUSE, HONG KONG.

TEL: (852)2577 5187

FAX: (852)2577 3190

<b>IDENTITY</b> (As Used on Label and List)  OMEGA690 75W140	<b>LAST ACCESSED:</b> 18/12/1998
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Polyalphaolefin	68037-01-4	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.86
<i>Vapor Pressure (mm Hg )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Red liquid with oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
>200°C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, and sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self-contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents: hydrogen peroxide, chromic acid, and bromine.

*Hazardous Decomposition or Products*

By open flame : carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	N.A.

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for oil mist is 5mg/m3 for a daily 8-hour exposure.

*Effects of Overexposure*

Swallowed: Ingestion or vomiting may result in its aspiration, which may cause pneumonitis.

Eye: May cause moderate eye irritation.

Skin: Prolonged or frequent contact may cause irritation or skin cracking.

Inhaled: Vapour or mist at concentration exceeding TLV may be irritating to the respiratory tract.

---

**Emergency & First Aid Procedures**

Swallowed: Do not induce vomiting. Aspiration of the fluid may cause lung injury (pneumonitis). Call a doctor immediately.

Eye: Flush eyes with water at least for 15 minutes with eyelids open.

Skin: Wash thoroughly with soap and water.

Inhaled: If respiratory irritation occurs move person to fresh air. If irritation continues call a doctor.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer spilt product into another container. Absorb remaining residue with absorbents. e.g. sand, vermiculite.

**Waste Disposal Method**

The product is not considered dangerous or poisonous. Dispose of according to local and national regulations.

**Precautions to Be Taken in Handling and Storing**

Keep container closed. Keep away from feed and food products.

**Other Precautions**

Keep out of reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for oil mist

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IDENTITY (As Used on Label and List)  OMEGA 696	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components		Other Limits	
(Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Recommended
Highly refined mineral oil**	64742-65-0	5 mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.900
Vapor Pressure (mm Hg )	@25C<1	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Bright, green oil

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
>250C	N.A.	-	-

**Extinguishing Media**

Water, dry chemicals, foam or carbon dioxide.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Strong oxidizing agents: hydrogen peroxide, chromic acid, bromine.

**Hazardous Decomposition or Products**

By open flame: carbon monoxide, carbon dioxide.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Swallowed: If person is conscious, give water or milk. Ingestion or vomiting may result in its aspiration which may cause pneumonitis.

Eye: May cause moderate eye irritation.

Skin: Prolonged or frequent contact may cause irritation or skin cracking.

Inhaled: Vapour or mist at concentrations exceeding ACGIH TLV may be irritating to the respiratory tract.

---

**Emergency & First Aid Procedures**

Swallowed: Do not induce vomiting. Aspiration of the fluid may cause lung injury (pneumonitis). Call a Doctor immediately.

Eye: Flush eyes with water at least for 15 minutes with eyelids open.

Skin: Wash thoroughly with soap and water.

Inhaled: If respiratory irritation occurs move person to fresh air. If irritation continues call a doctor.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer spilt product into another container. Absorb remaining residue with absorbents. e.g. sand, vermiculite.

**Waste Disposal Method**

The product is not considered dangerous or poisonous. Dispose of according to Federal, State or Local Government requirements.

**Precautions to Be Taken in Handling and Storing**

Keep container closed. Keep away from feed and food products.

**Other Precautions**

Keep out of reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* contains less than 3% DMSO extract as measured by IP 346.

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IDENTITY (As Used on Label and List)  OMEGA 699	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits	
			Recommended	
Highly refined mineral oils**	64741-88-4	5mg/m3 *	-	-
Highly refined mineral oils**	64742-55-8	5mg/m3 *	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	>330C	Specific Gravity (H2O = 1)	0.86
Vapor Pressure (mm Hg. )	0	Melting Point	<-45C
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	0

Solubility in Water Negligible

Appearance and Odor Red colored liquid with bland odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used) >177C (COC)	Flammable Limits N.A.	LEL -	UEL -
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**Extinguishing Media**

Dry chemical or waterfog or CO2 foam.

**Special Fire Fighting Procedures**

Do not use water except as fog.

**Unusual Fire and Explosion Hazards**

None

**SECTION IV - REACTIVITY DATA**

Stability Stable	Conditions to Avoid None
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**Incompatibility (Materials to Avoid)**

Strong oxidizers such as hydrogen peroxide, bromine, and chromic acid.

**Hazardous Decomposition or Products**

Carbon monoxide and carbon dioxide from burning. Oxides of phosphorous from burning. Oxides of sulfur.

Hazardous Polymerization Will Not Occur	Conditions to Avoid None
---	-----------------------------

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

---

**Effects of Overexposure**

Prolonged or repeated skin contact may cause dermatitis (skin irritation).

---

**Emergency & First Aid Procedures**

Eyes - Immediately flush with large quantities of water for at least 15 minutes and call a physician. Skin contact - Remove excess with cloth or paper. Wash thoroughly with soap and water. Inhalation - Remove victim to fresh air. Call a physician. If swallowed - Contact a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of mixture into another container. Absorb residue with an inert material such as earth, sand or vermiculite. Sweep up and dispose as solid waste in accordance with local, state, and federal regulations.

---

**Waste Disposal Method**

Dispose of in accordance with all applicable federal, state and local regulations.

---

**Precautions to Be Taken in Handling and Storing**

Do not handle or store at temperature over 38C.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

\*\* contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 747	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity: Common Name(s))			
Tributylphosphate	126-73-8	0.2ppm	-
Polydimethylsiloxane	9016-00-6	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	>200C	<i>Specific Gravity (H2O = 1)</i>	0.95
<i>Vapor Pressure (mm Hg. )</i>	<1	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	>1	<i>Evaporation Rate (Butyl-Ac=1)</i>	<1

*Solubility in Water* Insoluble*Appearance and Odor* Dark purple/blue liquid and odorless.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
182C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, alcohol-type or all-purpose-type foam.

*Special Fire Fighting Procedures*

Use self-contained breathing apparatus and protective clothing.

*Unusual Fire and Explosion Hazards*

None

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents

*Hazardous Decomposition or Products*

By open flame : Oxides of carbon, silicon, and phosphorous.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

<i>Threshold Limit Value</i>
See section I hazardous ingredient.

**Effects of Overexposure**

Swallowing : No evidence of harmful effects from available information.

Skin absorption: No edvidence of harmful effects from available information.

Inhalation: Short-term harmful health effects are not expected from vapor generated at ambient temperature.

Skin contact: Brief contact is not irritating. Prolonged or repeated contact may cause discomfort and local redness.

Eye contact: Causes irritation, experienced as stinging and discomfort or pain. Excess redness and swelling of the conjunctive may occur.

**Emergency & First Aid Procedures**

Swallowing: No emergency care anticipated.

Skin: Wash skin with soap and water.

Inhalation: No emergency care anticipated.

Eyes: Immediately flush eyes with water and continue washing for several minutes. Obtain medical attention.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Soak up small spills with absorbent material. Larger spills should be collected for disposal. Avoid runoff to sewers or waterways.

**Waste Disposal Method**

Incinerate in a furnace where permitted under Federal State and local regulations.

**Precautions to Be Taken in Handling and Storing**

Causes eye irritation. Avoid contact with eyes. Wash thoroughly after handling.

**Other Precautions**

Liquid waste fluid can be incinerated; if spilled material is collected by absorption on a solid absorbent, the solid waste material could be buried in a landfill. This fluid is insoluble in water, and will float on the surface; if a large spill occurs, avoid drainage to sewers or to natural waters.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

N.A.

**Work/Hygienic Practices**

N.A.

---

**Remarks**

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OMEGA MANUFACTURING DIVISION

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IDENTITY (As Used on Label and List)  OMEGA 754	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components		Other Limits	
(Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	N.A.	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Blue colored liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Above 100C (PMCC)	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Strong oxidizing agents: hydrogen peroxide, chromic acid, bromine.

**Hazardous Decomposition or Products**

By open flame : Carbon monoxide, carbon dioxide.

Hazardous	Conditions to Avoid
Polymerization	None
Will Not Occur	

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

---

**Emergency & First Aid procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water.

Inhalation: N.A. If swallowed: Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

---

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

---

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

---

**Other Precautions**

Keep out of the reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

---

**Protective Gloves**

Rubber or plastic oil resistant gloves.

---

**Eye Protection**

Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 756	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
(Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Amber colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C (PMCC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion, evolution of fumes, smoke and carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

*Effects of Overexposure*



Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro - intestinal irritation, nausea, vomiting, diarrhea.

---

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder before re-use. if swallowed - Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

---

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

Protective Gloves	Eye Protection
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

18/F, GUARDIAN HOUSE, HONG KONG.

TEL: (852)2577 5187

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 757	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
(Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Amber colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C (PMCC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion, evolution of fumes, smoke and carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

*Effects of Overexposure*

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro - intestinal irritation, nausea. If swallowed - Call a physician immediately.

---

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder before re-use. If swallowed - Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

---

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee for any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

**MATERIAL SAFETY DATA SHEET**

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IDENTITY(As Used on Label and List)  OMEGA 759	LAST ACCESSED: 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Highly refined base oil**	64742-53-6	5 mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	260C	Specific Gravity (H2O = 1)	0.88
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	>5	Evaporation Rate (- )	N.A.

Solubility in Water Negligible

Appearance and Odor Off-white liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Above 100 (PMCCC)	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

**Incompatibility (Materials to Avoid)**

Avoid contact with strong oxidizing agents.

**Hazardous Decomposition or Products**

Upon combustion - fumes, smoke and carbon dioxide.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - Prolonged or repeat contact can cause moderate irritation. Swallowing - Can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excessive water until irritation subsides. On skin - thoroughly flush area with soap and water. If swallowed - Call a physician.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand on remaining oil.

**Waste Disposal Method**

Small spill - Destroy by incineration.  
 Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 777	<b>LAST ACCESSED:</b> 24/07/1996
--	----------------------------------

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Green colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 100C (PMCC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion, evolution of fumes, smoke and carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

*Effects of Overexposure*

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro - intestinal irritation, nausea, vomiting, diarrhea.

---

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder before re-use. If swallowed - Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

---

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 778	<b>LAST ACCESSED:</b> 03/06/1997
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	<i>Other Limits</i> Recommended
Synthetic polyalphaolefin	68037-01-4	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	>250C	<i>Specific Gravity (H2O = 1)</i>	0.90
<i>Vapor Pressure (mm Hg. )</i>	<0.01 @25C	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (N.A. )</i>	N.A.

*Solubility in Water* Negligible

*Appearance and Odor* Natural fluorescent colored liquid.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> >215C	<i>Flammable Limits</i>	<i>LEL</i> N.A.	<i>UEL</i> N.A.
---	-------------------------	--------------------	--------------------

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

None expected. Autoignition temperature is in excess of 450C.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> None
----------------------------	------------------------------------

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents: hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

Incomplete combustion and high temperature thermal decomposition may promote oxides of carbon, nitrogen, sulfur and phosphorus.

<i>Hazardous Polymerization</i> Will Not Occur	<i>Conditions to Avoid</i> None
---	------------------------------------

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for oil mist is 5mg/m3 for a daily 8-hour exposure.

*Effects of Overexposure*

Swallowed : If swallowed and the person is conscious give water or milk. Ingestion or subsequent vomiting may result in its aspiration which could cause pneumonitis.

Eye : May cause moderate eye irritation.

Skin : Prolonged or frequent contact may cause skin irritation or cracking.

Inhaled : Vapour or mist at concentrations exceeding TLV may be irritating to the respiratory tract.

---

**Emergency & First Aid Procedures**

Swallowed : Do not induce vomiting. Aspiration of fluid may cause lung injury (pneumonitis). Call a physician immediately.

Eye : Rinse eye immediately with water for at least 15 minutes. In case of irritation seek medical advice.

Skin : Wash affected area with soap and water. Do not use solvents.

Inhaled : If respiratory irritation occurs move the person to fresh air. If irritation continues call a physician.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Prevent entry into sewers and waterways, product may be slippery.

---

**Waste Disposal Method**

Dispose of as per local regulations.

---

**Precautions to Be Taken in Handling and Storing**

As a precaution keep away from strong oxidising agents and sources of heat or ignition. Keep container closed. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

---

**Other Precautions**

Keep out of reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

---

**Protective Gloves**

Rubber or plastic oil resistant gloves.

---

**Eye Protection**

Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for oil mist.

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---

---

**MATERIAL SAFETY DATA SHEET**

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 790	<b>LAST ACCESSED:</b> 10/01/1997
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Medicinal paraffin oil	8042-47-5	*5mg/m3	-
N'N-Bis(2-Hydroxy ethyl) lauramide	120-40-1	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	>250C	<i>Specific Gravity (H2O = 1)</i>	0.885
<i>Vapor Pressure (mmHg @25C)</i>	<1	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (B.Acet =1)</i>	N.A.

Solubility in Water Negligible

Appearance and Odor Off-white colored oil

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
> 150C		N.A.	N.A.

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents: hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

Incomplete combustion and high temperature thermal decomposition may promote oxides of carbon, nitrogen, sulfur and phosphorus.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

---

**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

---

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water.

Inhalation: N.A. If swallowed: Call a physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

---

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

---

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

---

**Other Precautions**

Keep out of the reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

Protective Gloves	Eye Protection
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

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IDENTITY (As Used on Label and List)  OMEGA 101	LAST ACCESSED: 25/09/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components		Other Limits	
(Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Recommended
Ethylene glycol	107-21-1	50ppm *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	100C	Specific Gravity (H2O = 1)	0.98
Vapor Pressure (mm Hg. )	17.54	Melting Point	-10C
Vapor Density (AIR = 1)	>1	Evaporation Rate (water=1 )	<1

Solubility in Water Disperable

Appearance and Odor Light brown, semi liquid dispersion.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
None	N.A.	-	-

Extinguishing Media

N.A.

Special Fire Fighting Procedures

N.A.

Unusual Fire and Explosion Hazards

N.A.

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	None

Incompatibility (Materials to Avoid)

None

Hazardous Decomposition or Products

None

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	Belolw -10C.

**SECTION V - HEALTH HAZARD DATA**

Threshold Limit Value

See Section I hazardous ingredients.

---

**Effects of Overexposure**

N.A.

---

**Emergency & First Aid Procedures**

Skin and/or eyes contact - flush with water for 15 minutes.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Mop up spills with inert absorbent. Rinse contaminated area with water.

---

**Waste Disposal Method**

Dispose as normal garbage. Flush to drain with plenty of water.

---

**Precautions to Be Taken in Handling and Storing**

Keep containers tightly closed when not in use. Keep from freezing.

---

**Other Precautions**

Keep out of reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
None required for normal use.	None required for normal use.

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* Ceiling value.

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IDENTITY(As Used on Label and List)  OMEGA 120	LAST ACCESSED: 24/07/1996
--	---------------------------

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>  (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	<i>Other Limits</i>
			<i>Recommended</i>
d-Limonene	5989-27-5	-	-
Acrylic acid polymer (as dust)	9003-01-4	10mg/m3	-
Sodium hydroxide	1310-73-2	CL 2mg/m3	-
Propylene glycol	57-55-6	-	TDL0=79mg/kg
PCMX	88-04-0	-	-
Pumice (as dust)	-	10mg/m3	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	84.4C - 86.1C	<i>Specific Gravity (H2O = 1)</i>	1.0
<i>Vapor Pressure (mmHg )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Soluble

*Appearance and Odor* Green lotion with pumice and citrus scent.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
>61C	-	N.A.	N.A.

***Extinguishing Media***

Foam, carbon dioxide, or dry chemical.

***Special Fire Fighting Procedures***

Do not use water, treat as oil fire.

***Unusual Fire and Explosion Hazards***

None known.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

***Incompatibility (Materials to Avoid)***

Strong oxidizing agents.

***Hazardous Decomposition or Products***



None

<b>Hazardous Polymerization</b> Will Not Occur	<b>Conditions to Avoid</b> None
---	------------------------------------

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

See Section I hazardous ingredients.

**Effects of Overexposure**

Skin irritation following excessive use.

**Emergency & First Aid Procedures**

Eyes: Flush with water 15 minutes. Obtain medical attention.

Skin: Non-irritating under normal usage.

Ingestion: Drink water to dilute. Do not induce vomiting. Consult physician.

Inhalation: Not applicable under normal use condition.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Dike spill and absorb with non-flammable absorbent material.

**Waste Disposal Method**

Dispose of in accordance with applicable local, state and federal regulations.

**Precautions to Be Taken in Handling and Storing**

Store below 38C.

**Other Precautions**

N.A.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required for normal use.

<b>Ventilation</b>	<b>Local Exhaust</b> N.A.	<b>Special</b> N.A.
	<b>Mechanical (General)</b> N.A.	<b>Other</b> N.A.

**Protective Gloves**

N.A.

**Eye Protection**

None required for normal use.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

Normally used to clean hands.

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**Remarks**

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION  
MAGNA INDUSTRIAL CO. LIMITED  
18/F, GUARDIAN HOUSE, HONG KONG.  
TEL: (852)2577 5187  
FAX: (852)2577 3190

IDENTITY (As Used on Label and List)

LAST ACCESSED : 24/07/1996

OMEGA 901

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>	<i>CAS NO.</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
(Specific Chemical Identity : Common Name (s))			
Solvent naphtha (petroleum), medium aliphatic	64742-88-7	25ppm	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	*184C	<i>Specific Gravity (H2O = 1)</i>	0.828
<i>Vapor Pressure (mm Hg.)</i>	*0.5	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	*5.5	<i>Evaporation Rate (N-butyl A.)</i>	*0.08

*Solubility in Water* Negligible

*Appearance and Odor* Blue liquid with solvent odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
60C TCC	*	1	7

*Extinguishing Media*

Drychemical or waterfog or CO2 or foam or sand/earth.

*Special Fire Fighting Procedures*

Dense smoke. Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizers such as hydrogen peroxide, bromine, and chromic acid.

*Hazardous Decomposition or Products*

Carbon monoxide and carbon dioxide from burning. Oxides of nitrogen. Oxides of sulfur. SO2/H2S, depending upon decomposition conditions.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

See section I hazardous ingredient.

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**Effects of Overexposure**

May cause skin and eye irritation. May cause headache and dizziness.

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**Emergency & First Aid Procedures**

Eyes : Immediately flush with large quantities of water for at least 15 minutes and call a physician. Skin contact : Wash with water and soap. Inhalation : Remove to fresh air and if victim is not breathing, give artificial respiration. Call a physician immediately. If Swallowed : Call a physician immediately. Do not induce vomiting.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Avoid all ignition sources such as flames and sparks. Insure good ventilation. If volume is significant, transfer into containers for disposal. Seal containers tightly. Absorb on an inert ingredient such as earth, sand or vermiculite. Sweep up and dispose of according to Federal, State and local regulations.

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**Waste Disposal Method**

Dispose of in accordance with all applicable Federal, State and local regulations.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep away from feed and food products. If fumes are present see section VII. Avoid skin and eye contact. Do not swallow. Do not inhale.

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**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Solvent type respirator is recommended if the TLV of the product or any component is exceeded.

<i>Ventilation</i>	<i>Local Exhaust</i>	<i>Special</i>
	Required	N.A.
	<i>Mechanical (General)</i>	<i>Other</i>
	N.A.	N.A.

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**Protective Gloves**

Plastic, rubber, solvent resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* Based on solvent

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 902	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Polyethylene oxide	25322-68-3	-	-
Isopropyl alcohol	67-63-0	400ppm	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	~100C	<i>Specific Gravity (H2O = 1)</i>	1
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water Complete**Appearance and Odor* Purple colored thin liquid with slippery feeling, lilac odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> None	<i>Flammable Limits</i> N.A.	<i>LEL</i> -	<i>UEL</i> -
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*Extinguishing Media*

N.A.

*Special Fire Fighting Procedures*

None

*Unusual Fire and Explosion Hazards*

None

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> None
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*Incompatibility (Materials to Avoid)*

None

*Hazardous Decomposition or Products*

Upon combustion: Carbon dioxide and carbon monoxide may be evolved.

<i>Hazardous Polymerization</i> Will Not Occur	<i>Conditions to Avoid</i> None
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**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

See section I hazardous ingredients.

**Effects of Overexposure**

Mild skin irritation.

**Emergency & First Aid Procedures**

Eyes: Flush with water for 15 minutes.

Skin: Wash with water.

If swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Ventilate, mop up spills with absorbent. Flush contaminated area with plenty of water.

**Waste Disposal Method**

Send to an approved site or dispose of in accordance with State and local regulation regarding pollution.

**Precautions to Be Taken in Handling and Storing**

Keep container tightly sealed when not in use.

**Other Precautions**

Keep out of reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

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**MATERIAL SAFETY DATA SHEET**

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 903	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Refined light naphthenic distillate**	64741-96-4	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H20 = 1)</i>	0.954
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Purple colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 140C (C.O.C.)	N.A.	-	-

*Extinguishing Media*

Dry chemical, waterfog, carbon dioxide, foam, sand/earth.

*Special Fire Fighting Procedures*

Dense smoke. Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizers such as hydrogen peroxide, chromic acid, bromine.

*Hazardous Decomposition or Products*

CO and CO2 from burning; oxides of barium, sulfur, nitrogen; SO2/H2S depending upon decomposition conditions

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.



**Effects of Overexposure**

None when used with good personal hygiene practices. May otherwise cause skin and eye irritation upon prolonged or repeated contact.

**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes. Call a physician immediately. Skin contact: Remove excess with cloth or paper. Wash thoroughly with soap and water. Inhalation: Remove victim to fresh air. If swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 904	<b>LAST ACCESSED:</b> 23/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oil**	64745-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H20 = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Clear amber colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 190C (COC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, waterfog, CO2, foam or sand/earth.

*Special Fire Fighting Procedures*

Dense smoke. Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	Avoid breathing oil-mists.

*Incompatibility (Materials to Avoid)*

Strong oxidizers such as hydrogen peroxide, bromine, and chromic acid.

*Hazardous Decomposition or Products*

Carbon monoxide and carbon dioxide from burning. Aldehydes. Ketones.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

<i>Threshold Limit Value</i>
TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

*Effects of Overexposure*

None when used with good hygiene practices. May otherwise cause skin and eye irritation upon prolonged or repeated contact.

---

**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes and call a physician. Skin contact: Remove excess with cloth or paper. Wash thoroughly with soap and water. Inhalation: Remove victim to fresh air. If Swallowed: Contact a physician.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of mixture into another container. Absorb residue with an inert material such as earth, sand, or vermiculite. Sweep up and dispose as solid waste in accordance with local, state, and federal regulations.

---

**Waste Disposal Method**

Dispose of in accordance with all applicable federal, state and local regulations.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire. Keep out of reach of children.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

---

**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield

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**Other Protective Clothing or Equipment**

None required.

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist.

\*\* contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 905	<b>LAST ACCESSED:</b> 21/11/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Highly refined mineral oil**	64742-65-0	5mg/m3 *	-
Butyl cellosolve	111-76-2	25 ppm	-
Lead napethenate	61790-14-5	0.1mg(Pb)/m 3	N.A.

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	1.09
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Emulsion*Appearance and Odor* Green colored liquid with hydrocarbon odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
210C	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Of combustion, fumes, smoke and carbon dioxide may evolved.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - Prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. Remove clothing and launder clothing before re-use. If swallowed - Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper, absorbent and transfer to hood. Large spill - Exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand or absorbent on remaining oil and shovel into containers.

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

- \* TLV for mineral oil mist.
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

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**MATERIAL SAFETY DATA SHEET**

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IDENTITY (As Used on Label and List) <b>OMEGA 906</b>	LAST ACCESSED: 16/10/1998
--	---------------------------

**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Highly refined mineral oils**	64742-53-6	5mg/m3 *	-
Diethanolamine	111-42-2	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

Boiling Point	>200C	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg. )	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (Ether=1 )	<1

Solubility in Water Miscible

Appearance and Odor Dark amber liquid with mineral oil odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
174C, C.O.C.	N.A.	-	-

**Extinguishing Media**

Dry chemical, carbon dioxide, foam, sand.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.

**Unusual Fire and Explosion Hazards**

Dense smoke.

**SECTION IV - REACTIVITY DATA**

Stability	Conditions to Avoid
Stable	Avoid heating to abnormal temperature.

**Incompatibility (Materials to Avoid)**

None

**Hazardous Decomposition or Products**

Toxic vapors may be produced upon burning.

Hazardous Polymerization	Conditions to Avoid
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Harmful if swallowed or absorbed through skin. Causes mild skin irritation. May cause severe irritation to eyes.

**Emergency & First Aid Procedures**

Eyes - Flush with large amount of water, get medical attention.

Internal - Send for physician immediately.

External - Wash affected area with soap and water.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Use a sweeping compound to contain spills. Then shovel up the sweeping compound and dispose of via normal garbage or waste disposal. Rinse contaminated area with water.

**Waste Disposal Method**

Dispose of in accordance with local and national regulations.

**Precautions to Be Taken in Handling and Storing**

Store between 4C & 32C. Avoid contact with eyes, skin or clothing. Keep away from children.

**Other Precautions**

Do not store at extreme temperature. Keep from freezing.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 907	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-
Diesel fuel	-	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H20 = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Amber colored liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> 100C	<i>Flammable Limits</i> N.A.	<i>LEL</i> -	<i>UEL</i> -
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*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> None
----------------------------	------------------------------------

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Upon combustion - fumes, smokes and carbon dioxide.

<i>Hazardous Polymerization</i> Will Not Occur	<i>Conditions to Avoid</i> None
---	------------------------------------

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

**Effects of Overexposure**

Eyes - can cause irritation. Skin - prolonged or repeated contact can cause moderate irritation. Swallowing - can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

**Emergency & First Aid Procedures**

In eyes - Flush with excess water until irritation subsides. On skin - Thoroughly wash area with soap and water. if swallowed - Call physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Small spill - Absorb on paper absorbent and transfer to hood. Large spill - exclude persons from area not wearing protective equipment. Stop spill at source, use dike to retain and pump oil to salvage tank. Use sand on remaining oil and shovel into container.

**Waste Disposal Method**

Small spill - Destroy by incineration.  
Large spill - Destroy by liquid incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away form heat and fire.

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Saftey goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee for any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.



**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 908	<b>LAST ACCESSED:</b> 24/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Cadmium sulphate	10124-36-4	-	TDL <sub>o</sub> =3mg/kg
Oxalic acid	144-62-7	1mg/m <sup>3</sup>	-
Aluminium sulfate	10043-01-3	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	104C	<i>Specific Gravity (H<sub>2</sub>O = 1)</i>	1
<i>Vapor Pressure (mm Hg. )</i>	17	<i>Melting Point</i>	-
<i>Vapor Density (AIR = 1)</i>	>1	<i>Evaporation Rate (Water=1 )</i>	~1

*Solubility in Water* Soluble*Appearance and Odor* Dark purple solution**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
None	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

None

*Hazardous Decomposition or Products*

Upon combustion: Carbon dioxide &amp; carbon monoxide may evolved.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

See section I hazardous ingredients.

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**Effects of Overexposure**

Caustic and corrosive to skin, mucous membrane. Ingestion may cause gastro enteritis with vomiting.

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**Emergency & First Aid Procedures**

External: Wash with water and soap.  
Internal: Call physician immediately.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Ventilate, mop up spills with absorbent. Flush contaminated area with plenty of water.

---

**Waste Disposal Method**

Send to an approved site or dispose of in accordance with State and local regulation regarding pollution.

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**Precautions to Be Taken in Handling and Storing**

Use non-sparking tools - keep in a cool dry place. Keep containers tightly closed when not in use.

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**Other Precautions**

Keep out of reach of children.

---

**SECTION VII - CONTROL MEASURES**

---

**Respiratory Protection (Specify Type)**

Not required

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<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

---

<b>Protective Gloves</b>	<b>Eye Protection</b>
Plastic or Rubber	Face shield or goggles

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 909	<b>LAST ACCESSED:</b> 23/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Highly refined mineral oils**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Clear amber liquid with mineral oil odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Above 190C (COC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, waterfog, CO2, foam or sand/earth.

*Special Fire Fighting Procedures*

Dense smoke. Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizers such as hydrogen peroxide, bromine, and chromic acid.

*Hazardous Decomposition or Products*

Carbon monoxide and carbon dioxide from burning. Aldehydes. Ketones.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

*Effects of Overexposure*

None when used with good personal hygiene practices. May otherwise cause skin and eye irritation upon prolonged or repeated contact.

---

**Emergency & First Aid Procedures**

Eyes: Immediately flush with large quantities of water for at least 15 minutes and call a physician. Skin contact: Remove excess with cloth or paper. Wash thoroughly with soap and water. Inhalation: Remove victim to fresh air. If Swallowed: Contact a physician.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of mixture into another container. Absorb residue with an inert material such as earth, sand, or vermiculite. Sweep up and dispose as solid waste in accordance with local, state, and federal regulations.

---

**Waste Disposal Method**

Dispose of in accordance with all applicable federal, state and local regulations.

---

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat and fire. Keep out of reach of children.

---

**Other Precautions**

Avoid eye contact and prolonged and repeated skin contact. Wear impervious clothing and boots.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

Ventilation	Local Exhaust	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.

Protective Gloves	Eye Protection
Rubber	Safety glasses and full face shield

---

**Other Protective Clothing or Equipment**

None required

---

**Work/Hygienic Practices**

N.A.

---

**Remarks**

\* TLV for mineral oil mist

\*\* contains less than 3% DMSO extract as measured by IP 346.

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 915	<b>LAST ACCESSED:</b> 16/08/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Hydrotreated distillates, heavy paraffinic**	64742-54-7	5mg/m3 *	-
Zinc alkyl dithiophosphate	68649-42-3	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	1.098
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.
<i>Solubility in Water</i> Insoluble			
<i>Appearance and Odor</i> Dark brown liquid			

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> 150C (C.O.C.)	<i>Flammable Limits</i> -	<i>LEL</i> N.A.	<i>UEL</i> N.A.
<i>Extinguishing Media</i> Dry chemical, carbon dioxide, foam and water fog.			
<i>Special Fire Fighting Procedures</i> Fire fighters should wear an approved self contained breathing apparatus.			
<i>Unusual Fire and Explosion Hazards</i> Dense smoke			

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> Store below 66C.
<i>Incompatibility (Materials to Avoid)</i> Strong oxidizing agents	
<i>Hazardous Decomposition or Products</i> ***	
<i>Hazardous Polymerization</i> Will Not Occur	<i>Conditions to Avoid</i> None

**SECTION V - HEALTH HAZARD DATA**

<i>Threshold Limit Value</i> TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.
---



**Effects of Overexposure**

May cause skin & eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 min. Call a physician immediately. Skin contact: Wash thoroughly with soap and water. Inhalation: N.A. If swallowed: Call a physician immediately.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of the reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

- \* TLV for mineral oil mist
- \*\* Contains less than 3% DMSO extract as measured by IP 346.
- \*\*\* Heating this material may produce H2S at temperatures greater than 66C.

Normal combustion forms carbon dioxide and water vapor and may produce oxides of sulfur, nitrogen, phosphorus, and boron. Incomplete combustion can produce carbon monoxide.

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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Triphenyl phosphate	115-86-6	3 mg/m <sup>3</sup>	-
Phenyl isopropylated, phosphate	68937-41-7	-	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	243C	<i>Specific Gravity (H2O = 1)</i>	1.15
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	10	<i>Evaporation Rate (But-Acet=1)</i>	<1

*Solubility in Water* Less than 0.01%

*Appearance and Odor* Fluorescent yellow-green liquid with no odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> Above.198C. (PMCC)	<i>Flammable Limits</i>	<i>LEL</i> N.A.	<i>UEL</i> N.A.
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***Extinguishing Media***

Dry chemical, carbon dioxide, foam, sand.

***Special Fire Fighting Procedures***

Fire fighters should wear an approved self contained breathing apparatus.

***Unusual Fire and Explosion Hazards***

Dense smoke, phosphorus compound fumes.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> None
----------------------------	------------------------------------

***Incompatibility (Materials to Avoid)***

Strong mineral acids, oxidizing agents

***Hazardous Decomposition or Products***

Carbon dioxide, phosphorus compound fumes and carbon monoxide

<i>Hazardous Polymerization</i> Will Not Occur	<i>Conditions to Avoid</i> None
---	------------------------------------

**SECTION V - HEALTH HAZARD DATA*****Threshold Limit Value***

See Section I hazardous ingredient.

**Effects of Overexposure**

May cause irritation to skin and eyes. Ingestion may cause nausea and vomiting.

**Emergency & First Aid Procedures**

Skin/Eye contact: Wash with copious amounts of water.

Ingestion: Get medical attention.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Absorb spillage with inert absorbent. Wash contaminated area with large amount of water.

**Waste Disposal Method**

Dispose of according to local, State or Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed when not in use.

**Other Precautions**

Keep out of reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

None required for normal use.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Plastic or rubber.	Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 929	<b>LAST ACCESSED:</b> 15/06/1998
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i>			<i>Other Limits</i>
<i>(Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Recommended</i>
Naphtha (petroleum), hydrotreated heavy **	64742-48-9	5mg/m <sup>3</sup>	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H20 = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Dark brown colored liquid with white spirit odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
45C (PMCC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

By open flame: Carbon monoxide, carbon dioxide

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA**

<i>Threshold Limit Value</i>
TLV for mineral oil mist is 5mg/m <sup>3</sup> for a daily 8-hour exposure.

*Effects of Overexposure*

Eyes - Can cause severe irritation redness and tearing. Skin - Prolonged exposure may cause moderate irritation and dermatitis. Breathing - cause dizziness and light headedness. Swallowing - can cause gastro-intestinal irritation.

**Emergency & First Aid Procedures**

In eyes - Flush with large amount of water, get medical attention. On skin - Thoroughly wash exposed area with soap and water. Swallowed - Get medical attention. If breathed - remove patient to fresh air. If breathing is difficult, administer oxygen.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Eliminate all ignition sources.

Small spill - Absorb on paper, absorbent and move to hood. Allow to evaporate.

Large spill - Exclude person from area not wearing protective equipment.

Stop spill at source, dike to retain spill, pump to salvage tank. Use sand or absorbent on remain material.

**Waste Disposal Method**

Small spill - Allow volatile portion to evaporate in hood. Destroy remaining by burning.

Large spill - Destroy by incineration with off-gas scrubber.

**Precautions to Be Taken in Handling and Storing**

Keep container closed when not in use. Keep away from heat, fire and ignition sources.

**Other Precautions**

Avoid eye contact, repeated or prolonged skin contact, wear impervious clothing.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

If TLV of material exceeded, use self-contained breathing apparatus with full facepiece in pressure demand.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	Required	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves.

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

None required

**Work/Hygienic Practices**

N.A.

**Remarks**

\* TLV for mineral oil mist.

\*\* Contains less than 0.1% W/W benzene.

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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	<i>Other Limits</i> Recommended
Petroleum Distillates	8008-20-6	100 ppm	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	185C	<i>Specific Gravity (H2O = 1)</i>	0.805
<i>Vapor Pressure (Torr )</i>	1	<i>Melting Point</i>	45
<i>Vapor Density (AIR = 1)</i>	6.1	<i>Evaporation Rate (N.A. )</i>	N.A.

*Solubility in Water* Negligible*Appearance and Odor* Amber, clear liquid with petroleum odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
44C		N.A.	N.A.

*Extinguishing Media*

Dry chemical, carbon dioxide, foam, sand.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Vapors are heavier than air and may travel along ground or be moved by ventilation and ignited by heat, pilot lights, other flames and ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum because product can be ignited explosively.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents such as: Hydrogen peroxide, chromic acid, bromine

*Hazardous Decomposition or Products*

Various hydrocarbons, carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

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**SECTION V - HEALTH HAZARD DATA**

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**Threshold Limit Value**

See section I hazardous ingredients.

**Effects of Overexposure**

May cause skin and eye irritation with prolonged contact.

**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 minutes. Call physician immediately. Skin contact: Wash thoroughly with soap and water.

Inhalation: N.A. If swallowed: Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

**Other Precautions**

Keep out of reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Solvent type respirator.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	Required	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	Required	N.A.

**Protective Gloves**

Rubber or plastic oil resistant gloves

**Eye Protection**

Safety goggles and full face shield.

**Other Protective Clothing or Equipment**

Impervious clothing and boots.

**Work/Hygienic Practices**

N.A.

**Remarks**

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**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200, Standard must be consulted for specific requirements.

OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

18/F, GUARDIAN HOUSE, HONG KONG.

TEL: (852)2577 5187

FAX: (852)2577 3190

<b>IDENTITY</b> (As Used on Label and List)  OMEGA 991	<b>LAST ACCESSED:</b> 19/08/1997
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	Other Limits Recommended
Petroleum oil	64742-58-1	5mg/m3 *	-
N-Nonane	111-84-2	200ppm	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	316C	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	0.1 at 20C	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	6.0	<i>Evaporation Rate (Kerosene=1)</i>	<1

*Solubility in Water* Insoluble

*Appearance and Odor* Light tan viscous liquid.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
Over 149C T.O.C.		N.A.	N.A.

**Extinguishing Media**

Dry chemical, carbon dioxide and foam.

**Special Fire Fighting Procedures**

Fire fighters should wear an approved self contained breathing apparatus.  
Water may be ineffective.

**Unusual Fire and Explosion Hazards**

None

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

**Incompatibility (Materials to Avoid)**

Strong oxidizing agents such as: hydrogen peroxide, chromic acid, bromine

**Hazardous Decomposition or Products**

Carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA****Threshold Limit Value**

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

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**Effects of Overexposure**

Respiratory difficulty. May cause skin and eye irritation with prolonged contact.

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**Emergency & First Aid Procedures**

Eyes: Flush with large amounts of water for at least 15 minutes. Call a physician immediately.

Skin contact: Wash thoroughly with soap and water. Inhalation: Remove to fresh air.

If swallowed: Drink 2 glasses of water. Call a physician immediately.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to Be Taken In Case Material Is Released or Spilt**

Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, earth, vermiculite. Sweep up and dispose of as solid waste in accordance to local, State and Federal regulations.

---

**Waste Disposal Method**

By methods consistent with local, State and Federal regulations.

---

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

---

**Other Precautions**

Keep out of the reach of children.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

None required for normal use.

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<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

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<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required for normal use.

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* TLV for mineral oil mist.

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arising out of their use.

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**MATERIAL SAFETY DATA SHEET**

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<b>IDENTITY (As Used on Label and List)</b>  <b>OMEGA 992</b>	<b>LAST ACCESSED:</b> 19/08/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components (Specific Chemical Identity: Common Name(s))</i>	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits Recommended</i>
Xylene	1330-20-7	150 ppm	-
Ethylbenzene	100-41-4	100ppm	-
Petroleum oil	64742-58-1	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	>100C	<i>Specific Gravity (H2O = 1)</i>	0.9
<i>Vapor Pressure (mm Hg. )</i>	-	<i>Melting Point</i>	-
<i>Vapor Density (AIR = 1)</i>	-	<i>Evaporation Rate (B.Acet=1)</i>	-

*Solubility in Water* Nil

*Appearance and Odor* Dark, thin liquid with solvent odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i> 70C TOC	<i>Flammable Limits</i>	<i>LEL</i> N.A.	<i>UEL</i> N.A.
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*Extinguishing Media*

Water, fog, dry chemical or foam.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i> Stable	<i>Conditions to Avoid</i> Strong oxidizing agents, extreme heat **.
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*Incompatibility (Materials to Avoid)*

Avoid contact with strong oxidizing agents.

*Hazardous Decomposition or Products*

Upon combustion - fumes, smokes and carbon dioxide.

<i>Hazardous Polymerization</i> Will Not Occur	<i>Conditions to Avoid</i> None
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**SECTION V - HEALTH HAZARD DATA**

*Threshold Limit Value*

TLV for mineral oil mist is 5mg/m<sup>3</sup> for a daily 8-hour exposure.  
See Section I hazardous ingredients.

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**Effects of Overexposure**

Swallowing: Will cause irritation of gastro-intestinal tract.  
Inhalation: Oil mist PEL 5mg/m<sup>3</sup>, may cause dizziness and other central nervous system effects.  
Skin contact: May cause irritation, defatting or drying.  
Eye contact: May cause irritation, redness.

---

**Emergency & First Aid Procedures**

Swallowing: Do NOT INDUCE VOMITING. Seek medical attention. Skin: Wash with soap and water.  
Inhalation: Remove to fresh air.  
Eyes: Flush with large amounts of water for at least 15 minutes lifting upper and lower lids occasionally. Seek medical attention.

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**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Soak up spills. Prevent spills from entering sewers or water ways.

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**Waste Disposal Method**

Dispose of in accordance with federal, state and local regulations.

---

**Precautions to Be Taken in Handling and Storing**

Keep containers closed. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wash clothing before re-use. Keep away from feed and food products.

---

**Other Precautions**

Keep out of reach of children.

---

**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

---

**Protective Gloves**

Rubber or plastic oil resistant gloves.

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**Eye Protection**

Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* TLV for mineral oil mist.  
\*\* Exposure to direct light for long periods of time renders product ineffective.

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**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 998	<b>LAST ACCESSED:</b> 17/07/1997
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	CAS NO	TLV	<i>Other Limits</i> Recommended
Isopropyl Alcohol	67-63-0	400ppm	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	82C	<i>Specific Gravity (H2O = 1)</i>	0.785
<i>Vapor Pressure (mm Hg. )</i>	33 @20C	<i>Melting Point</i>	N.A.
<i>Vapor Density (AIR = 1)</i>	2	<i>Evaporation Rate (But-Acet=1)</i>	>1

*Solubility in Water* Completely soluble

*Appearance and Odor* Clear amber liquid with alcohol odor.

**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
12.2C TCC		2	12

***Extinguishing Media***

Alcohol foam, carbon dioxide or dry chemical.

***Special Fire Fighting Procedures***

Fire fighters should wear an approved self contained breathing apparatus.

***Unusual Fire and Explosion Hazards***

Dense smoke

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

***Incompatibility (Materials to Avoid)***

Extreme Heat - Strong oxidizing agents.

***Hazardous Decomposition or Products***

Dense smoke, carbon monoxide, carbon dioxide.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA*****Threshold Limit Value***

See Section I hazardous ingredients.

***Effects of Overexposure***

Eye Contact: Can cause severe irritation, redness, tearing, blurred vision.

Skin Contact: Can cause moderate irritation, defatting, dermatitis.

Inhalation: Excessive breathing of vapors can cause nasal & respiratory irritation, dizziness, fatigue, headache, asphyxiation.

Swallowing: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Emergency & First Aid Procedures**

Eye Contact: Flush With large amounts of water for at least 15 minutes lifting upper & lower lids occasionally. Get medical attention immediately.

Skin Contact: Wash thoroughly with soap & water. Remove Contaminated clothing and wash before reuse.

Inhalation: remove to fresh air. If breathing is difficult administer oxygen. Get medical attention.

Swallowing: Give few glasses of water immediately and induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps to Be Taken In Case Material Is Released or Spilt**

Absorb on inert material and transfer to storage tank. Eliminate all source of ignition. Stop spill at source. Dike area to prevent spreading to sanitary sewer. Pump to salvage tank. Contaminated absorbent may be deposited in sanitary landfill.

**Waste Disposal Method**

Dispose of in accordance with Federal, State and local regulations.

**Precautions to Be Taken in Handling and Storing**

Avoid breathing vapors, fumes, mist and gases. Keep away from heat, sparks and open flames. No smoking or flares. Vapors are heavier than air and may travel along ground or be moved by ventilation and ignited at source distant from handling point.

**Other Precautions**

Keep out of reach of children.

**SECTION VII - CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Natural rubber, neoprene.	Splash proof safety goggles.

**Other Protective Clothing or Equipment**

Impervious clothing & boots to prevent prolonged contact with skin.

**Work/Hygienic Practices**

N.A.

**Remarks**



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**MATERIAL SAFETY DATA SHEET**

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OMEGA MANUFACTURING DIVISION

MAGNA INDUSTRIAL CO. LIMITED

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<b>IDENTITY</b> (As Used on Label and List)  OMEGA 999	<b>LAST ACCESSED:</b> 25/07/1996
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**SECTION I - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<i>Hazardous Components</i> (Specific Chemical Identity: Common Name(s))	<i>CAS NO</i>	<i>TLV</i>	<i>Other Limits</i> Recommended
Highly refined mineral oil**	64742-65-0	5mg/m3 *	-

**SECTION II - PHYSICAL CHARACTERISTICS**

<i>Boiling Point</i>	N.A.	<i>Specific Gravity (H2O = 1)</i>	0.96
<i>Vapor Pressure (mm Hg. )</i>	N.A.	<i>Melting Point</i>	Unknown
<i>Vapor Density (AIR = 1)</i>	N.A.	<i>Evaporation Rate (- )</i>	N.A.

*Solubility in Water* Insoluble*Appearance and Odor* Amber with pungent odor.**SECTION III - FIRE AND EXPLOSION HAZARD DATA**

<i>Flash Point (Method Used)</i>	<i>Flammable Limits</i>	<i>LEL</i>	<i>UEL</i>
90C (PMCC)	N.A.	-	-

*Extinguishing Media*

Dry chemical, carbon dioxide, alcohol foam.

*Special Fire Fighting Procedures*

Fire fighters should wear an approved self contained breathing apparatus.

*Unusual Fire and Explosion Hazards*

Toxic fumes, gases or vapors may evolve on burning. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Container may rupture on heating.

**SECTION IV - REACTIVITY DATA**

<i>Stability</i>	<i>Conditions to Avoid</i>
Stable	None

*Incompatibility (Materials to Avoid)*

Strong oxidizing agents

*Hazardous Decomposition or Products*

Of combustion, smoke, carbon monoxide, aldehydes and other products of incomplete combustion.

<i>Hazardous Polymerization</i>	<i>Conditions to Avoid</i>
Will Not Occur	None

**SECTION V - HEALTH HAZARD DATA***Threshold Limit Value*

TLV for mineral oil mist is 5mg/m3 for a daily 8-hour exposure.

---

**Effects of Overexposure**

Harmful if inhaled. Causes eye irritation. Causes skin irritation. May be harmful if absorbed through skin. May cause respiratory tract irritation.

---

**Emergency & First Aid Procedures**

Skin: Wash immediately with soap and water.

Eye: Flush immediately with water for at least 15 minutes. Get immediate medical attention. Inhalation: Remove exposed person to fresh air if adverse effects are observed. Oral: Get immediate medical attention.

---

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to Be Taken In Case Material Is Released or Spilt**

Evacuate all non-essential personnel. Personal protective equipment must be worn. Prevent entry into sewers and waterways. Pick up free liquid for recycling and/or disposal if can be accomplished safely with explosive proof equipment.

---

**Waste Disposal Method**

Unaltered material not expected to be a hazardous waste.

Disposal should be in compliance with local government laws.

---

**Precautions to Be Taken in Handling and Storing**

Keep away from potential sources of ignition. Store in well ventilated area. Open container in a well ventilated area. Keep container closed when not in use.

---

**Other Precautions**

Avoid breathing vapors. Wash thoroughly after handling. Launder contaminated clothing before re-use.

Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flames, spark or other sources of ignition.

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**SECTION VII - CONTROL MEASURES**

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**Respiratory Protection (Specify Type)**

Avoid breathing oil mist.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Special</b>
	N.A.	N.A.
	<b>Mechanical (General)</b>	<b>Other</b>
	N.A.	N.A.

<b>Protective Gloves</b>	<b>Eye Protection</b>
Rubber or plastic oil resistant gloves.	Safety goggles and full face shield.

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**Other Protective Clothing or Equipment**

None required

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**Work/Hygienic Practices**

N.A.

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**Remarks**

\* TLV for mineral oil mist

\*\* Contains less than 3% DMSO extract as measured by IP 346.

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