

Omega 660

DESCRIPTION:

Omega 660 is a high quality Heat Transfer Lubricant of superior thermal stability. It is engineered to the highest operating standards to resist sludging tendencies common with low quality oils.

Omega 660 is produced from an exceptionally fine, low viscosity base oil. This improves heat transfer properties immensely and also provides superior thermal stability and resistance to thermal cracking at elevated temperatures.

INCREASED THERMAL STABILITY:

Ordinary heat transfer oils lack the stability at temperature extremes to prevent sludging and deposition of oil solids on internal oil-side parts. Omega 660 however features a select range of additives that provide maximum thermal stability at elevated temperatures through thousands of cyclic temperature cycles (start up/shut downs).

These special additives minimize deposits to inconsequential and non-damaging proportions. Proprietary dispersants also control sludge which would otherwise decrease heat transfer rates.

The highly improved thermal efficiency of Omega 660 all but eliminates the necessity to frequently drain, dispose and replenish heat transfer oil systems.

IMPROVED CALORIFIC CAPACITY RESERVE:

Omega 660 ensures rapid and increased efficiency heat transfer to the process environment. Its high viscosity index minimizes viscosity variations during temperature climbs and drops. Heat transfer rate is properly controlled for the first time due to Omega 660's stable viscosity.

Omega 660 features extremely low volatility due to special choice petroleum fraction constituents. Its low vapour pressure and extended boiling point enable heat transfer systems to operate at both low pressures and elevated temperatures.

DECREASED OPERATIONAL COSTS:

Omega 660's lower viscosity at all operating temperatures lower energy requirements for pumping and circulation purposes. Smaller pumps can be used or alternately, bigger existing pumps can be run at lower and more economical speeds due to the low load presented by Omega 660 at start-up.

Omega 660 is completely safe under normal handling conditions and is completely non-toxic.

USES:

Omega 660 is engineered for use in closed heat transfer systems equipped with expansion tanks and operating to 320°C (608°F). It is ideal as a heat transfer medium in processing industries such as plastics, waxes, resin, fiberboard, varnish, asphalt, grease, rubber, soap and pharmaceuticals manufacturing.

Omega 660 enables extremely close process temperature control and reduces the risk of fire as no direct heat is exposed to flammable processing materials. The uniform transfer of heat provided by Omega 660 reduces the possibility, of overheating which is a common problem in processing industries. Omega 660 is also highly effective as a quenching oil and is recommended for heat-treating steels due to its high heat capacity, good heat conductivity, low viscosity, high thermal stability and high flash point.

APPLICATION:

The circulation system must be totally enclosed. This will help prevent fluid contamination, losses from vaporization and excessive oxidation.

In order to maximize operating life, the following should be observed:

- Keep system clean, enclosed and free of air leaks.
- Ensure turbulent fluid flow in heat transfer tubes to maximize heat transfer rate.
- Maintain flow rates at between 1.5 to 3 metres (5 feet to 12 feet) per second to reduce localized overheating.

MAGNA INDUSTRIAL CO. LIMITED

Total Quality Maintenance

1801, Guardian House, 32 Oi Kwan Road, Wanchai, Hong Kong Tel: (852) 2577 5187 Fax: (852) 2577 3190
E-Mail: magna@magnagroup.com Web Site: www.magnagroup.com

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MATERIAL SAFETY DATA SHEET

DATE 01 Aug 2014

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name/Code Omega 660

Company Identification

Omega Manufacturing Division,
Magna Industrial Co. Limited,
1801, Guardian House,
32 Oi Kwan Road,
Wanchai, Hong Kong.

Distributor

Alshawi Trading,
Block 351, Road 51, Bldg 20, Manama - Bahrain.
www.alshawitrading.com
info@alshawitrading.com
P.O.Box 33526

Telephone (852) 25775187
Fax (852) 25773190

Telephone (973) 1755 0019
Fax (973) 1755 5108

SECTION 2 - HAZARDS IDENTIFICATION

Not classified as hazardous.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS Number</u>	<u>Wt.%</u>	<u>Classification</u>
Highly refined mineral oil**	64742-65-0	60-100	-

SECTION 4 - FIRST-AID MEASURES

Eye Contact: Flush with plenty of water for at least 15 minutes. Seek immediate medical attention.

Skin Contact: Wash thoroughly with soap and water. Obtain medical attention in case of skin irritation or other cause for concern.

Inhalation: Move patient to open air.

Ingestion: Do not induce vomiting. Seek immediate medical attention.

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SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, waterfog, foam, sand and carbon dioxide.

Special Protective Equipment for Fire Fighters: Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Dense smoke. Carbon dioxide, carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spillage: Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as sand, vermiculite. Sweep up and dispose of in accordance with local and national regulations.

SECTION 7 - HANDLING AND STORAGE

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.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ACGIH TLV

Highly refined mineral oil 5 mg/m³ (oil mist)

Eye Protection: Safety goggles and full-face shield

Hand Protection: Rubber or plastic oil resistant gloves.

Ventilation: Use under well ventilated conditions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber liquid

Odour: Mineral oil odour

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pH: N.A.
Specific Gravity: 0.90
Vapour Pressure: N.A.
Boiling Point: N.A.
Melting Point: N.A.
Flash Point: above 100°C
Flammability: N.A.
Evaporation Rate: N.A.
Solubility in Water: Insoluble

SECTION 10 - STABILITY AND REACTIVITY

Stable under normal condition.

Materials to Avoid: Strong oxidizing agents, hydrogen peroxide, chromic acid, bromine.

Toxic compounds may form on thermal decomposition. Hazardous combustion products: carbon monoxide, carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

There is no lethal dose information available.

Inhalation: Inhalation of vapours can cause irritation of the respiratory tract. High concentrations of oils, mists or vapours can cause chemical pneumonitis.

Skin: May cause irritation, drying and cracking.

Eyes: Cause irritation.

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

SECTION 12 - ECOLOGICAL INFORMATION

No ecological information is available at present.

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SECTION 13 - DISPOSAL CONSIDERATIONS

Comply with all local and national regulations regarding disposal.

SECTION 14 - TRANSPORT INFORMATION

UN Number : Not regulated

IATA Class : Not regulated, Packing Group: Not regulated

IMDG Class : Not regulated, Packing Group: Not regulated

Not considered hazardous for transport purpose.

SECTION 15 - REGULATORY INFORMATION

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SECTION 16 - OTHER INFORMATION

R-phrases: -

S-phrases: -

**The highly refined mineral oil used in this product contains less than 3% DMSO extract as measured by IP 346.

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.