



The Ultimate Lubricant

613

DESCRIPTION:

Omega 613 is a superb air compressor & vacuum pump lubricant designed to provide a new dimension to compressor/vacuum pump safety and cost-saving functionality. The ideal characteristics such an oil should have are, high chemical stability, good flash point, high thermal stability, high degree of refinement and purity, and it must be heavily fortified against the formation of rust, corrosion and oxidation. It must have a balanced viscosity that will ensure the essential protection for fine clearances and tolerances.

CARBON RESISTANCE:

Omega 613 resists the formation of carbon. Ordinary oils promote this formation because of their high degree of impurity and their susceptibility to contamination. This combination forms rapid 'hot spots' that soon develop into granite-like carbon deposits. Omega 613's exceptional lubricity not only closes seals and thereby improves pressure output, but also resists high temperature destruction.

The use of ordinary or inadequate lubricants in today's compressors is dangerous. A reaction caused when heat and carbon formation are swept into the receiver can be an explosion or a hazardous fire. Unfortunately, this fact is often ignored or misunderstood until it is too late.

VISCOSITY STABLE:

Omega 613 has built-in viscosity improvers that provide the added fine clearance protection essential to long term compressor/vacuum pump efficiency. The fluidity or lubricant texture remains stable despite temperature variations.

OXIDATION RESISTANT:

Omega 613 provides exceptional protection against oxidation. Since compressor and/or vacuum pump equipment is constantly subjected to the oxygen in the air, unless exceptional protection is provided, oxidation will occur. Oxidation causes corrosion which leads to the disintegration of costly equipment.

APPLICATIONS:

Omega 613 is extremely versatile and can be used on all types of compressor equipment including:

- Screw Compressors (dry and flooded)
- Rotary Compressors
- Gear Compressors
- Centrifugal Compressors
- Twin-Lobe Compressors
- Axial Flow Compressors
- Internally Compounded Compressors
- All types of Vacuum Pumps

The major function in all cases is based on a superiority in the suction, transfer, compression and discharge actions. Generally speaking, this type of equipment can be divided into two categories.

- (A) The Mechanical or positive displacement category.
- (B) The Centrifugal or active force acting type for moving entrapped gas.

Omega 613 provides the necessary protection and acts as a safety factor, regardless of whether the equipment is the Multistage Reciprocating Compressor type or the Expansion System type (with a cryogenic temperature of exceptionally low variance) or Vacuum Pumps.

SUPERIOR FOR VACUUM PUMPS:

Since Vacuum Pumps function similarly to Air Compressors - in reverse - Omega 613 is also strongly recommended for achieving maximum performance with all types of vacuum pumps.

CORRECT TEXTURE FOR DRIP FEEDING:

One major problem with all ordinary oils is the poor viscosity - preventing correct drip and feed speed. Omega 613 however, has built-in stability so that feed timing can be accurately calculated to meet the demands of the equipment. Too fast an input leads to carbon build-up and too slow an input means disastrous metal-to-metal contact.

TYPICAL DATA:

TEST	ASTM TEST METHOD	TEST RESULT			
		SAE 10	SAE 20	SAE 30	SAE 40
ISO Viscosity Grade	D-2422	32	68	100	150
Density, kg/L @ 15°C	D-1298	0.867	0.871	0.871	0.882
Viscosity, cSt @ 40°C	D-445	32.9	68	100	150
Viscosity, cSt @ 100°C	D-445	5.8	8.7	11.3	14.8
Viscosity Index	D-2270	105	105	101	101
Flash Point, COC, °C	D-92	215	243	261	264
Pour Point, °C	D-97	-21	-27	-27	-24
Aniline Point °C	D-611	116	119	111	113
Copper Corrosion (3 hrs, 100°C)	D-130	1b	1b	1b	1b
Foaming Characteristics -					
All Sequences, After Settling	D-892	Nil	Nil	Nil	Nil
Oxidation Characteristics -					
TOST life, hours	D-943	>5000	>5000	>5000	>4000
Rust-Preventing Characteristics	D-665	Pass	Pass	Pass	Pass
Air Release, 2 min	Typical NFT 60149	2 min.	2 min.	2 min.	2 min.
Zinc, % Mass	AA	0.027	0.027	0.027	0.027

The characteristics given above are typical of current production only and slight batch to batch variations should be expected.

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: Omega 613
Container size: 5 l, 20 l

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application: Hydraulic oil. / Compressor oil

1.3. Details of the supplier of the safety data sheet

Supplier: EU importer:

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Manufacturer: ITW PP & F Korea Limited.
13th Fl., Unit B, PAX Tower
609 Eonju-ro, Gangnam-gu
Seoul, Korea 06108
Tel:+82-2-2088-3560
Fax:+82-2-513-3567
magna@magnagroup.com
www.magnagroup.com

1.4. Emergency telephone number

Emergency telephone: Call a Poison Center, emergency number or doctor/physician.

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The product is not classified.

2.2. Label elements

The substance/mixture does not meet the criteria for classification and labelling.

2.3. Other hazards

PBT/vPvB: This product does not contain any PBT or vPvB substances.

Other: Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema, skin cracking and oil acne. Degreasing to skin. The harmful effects may increase in used oil.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

The product contains: mineral oil and additives.

Only classified substances above threshold limits or substances with an exposure limit are shown.
All substances in the product are either registered or exempt from registration under REACH.

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CLP:

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>REACH Reg. No.:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
60-100	64742-65-0	265-169-7	01-2119471299-27-0058	Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil-unspecified	-	L

Notes: L: DMSO < 3% (IP 346)

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Move into fresh air and keep at rest. In case of persistent throat irritation or coughing or after inhalation of oil mist: Seek medical attention and bring along these instructions.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions.

4.2. Most important symptoms and effects, both acute and delayed

4.3. Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media: Small fires: Extinguish with carbon dioxide or dry powder.
Larger fires: Extinguish with foam, carbon dioxide or dry powder.
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards: During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid inhalation of oil mist and contact with skin and eyes. Follow precautions for safe handling described in this safety data sheet.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Absorb spillage with oil-absorbing material. Clean contaminated area with oil-removing material.

6.4. Reference to other sections

References: For personal protection, see section 8.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Observe good chemical hygiene practices. Avoid prolonged and repeated contact with oil, particularly used oil. Always remove oil with soap and water or skin cleaning agent, never use organic solvents. Do not use oil-contaminated clothing or shoes, and do not put rags moistened with oil into pockets.

Technical measures: Use work methods which minimise oil mist production.

Technical precautions: When working with heated oil, mechanical ventilation may be required.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: No special precautions.

Storage conditions: Store in tightly closed original container.

7.3. Specific end use(s)

Specific use(s): Lubricant.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

No occupational exposure limit assigned.

8.2. Exposure controls

<u>Engineering measures:</u>	Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours and oil mist. Provide access to washing facilities incl. soap, skin cleanser and fatty cream.
<u>Personal protection:</u>	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<u>Respiratory equipment:</u>	In case of inadequate ventilation or risk of inhalation of oil mist, suitable respiratory equipment with combination filter (type A2/P3) can be used.
<u>Hand protection:</u>	Wear protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.
<u>Eye protection:</u>	Risk of contact: Wear goggles/face shield.
<u>Skin protection:</u>	Wear apron or protective clothing in case of splashes.
<u>Hygiene measures:</u>	Wash hands after handling. Wash contaminated clothing before reuse.
<u>Environmental Exposure Controls:</u>	Not available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance: Clear, yellowish liquid.
Odour: Almost odourless.
Odour threshold: Not available.
pH: Not available.
Melting point / freezing point: Not available.
Boiling point: Not available.
Flash point: > 150°C
Evaporation rate: Not available.
Flammability (solid, gas): Not applicable.
Explosive limits Not available.
Vapour pressure: Not available.
Vapour density: Not available.
Relative density: ~ 0,9
Solubility: Immiscible with water.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature (°C): Not available.
Decomposition temperature (°C): Not available.
Viscosity: 32 / 68 / 100 / 150 mm²/s (40°C)
Explosive properties: Not available.
Oxidising properties: Not available.
9.2. Other information
Other data: Not available.

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity: Not reactive.

10.2. Chemical stability

Stability: Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Conditions to avoid Heat, sparks, flames.

10.5. Incompatible materials

Incompatible materials: Strong oxidising substances.

10.6. Hazardous decomposition products

Hazardous decomposition products: None in particular.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

The harmful effects may increase in used oil.

Acute Toxicity (Oral): Based on available data, the classification criteria are not met.

Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.

Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive Toxicity: Based on available data, the classification criteria are not met.

STOT - Single exposure: Based on available data, the classification criteria are not met.

STOT - Repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Inhalation: Inhalation of oil mist or vapours formed during heating of the product will irritate the respiratory system and provoke coughing.

Skin contact: Degreasing. Prolonged or frequent contact may cause redness, itching, irritation, eczema, skin cracking and oil acne.

Eye contact: Splashes may irritate.

Ingestion: May irritate and cause malaise.

Specific effects: Prolonged or repeated contact with used oil may cause serious skin diseases, such as dermatitis and skin cancer.

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity: Oil spills are generally hazardous to the environment.

12.2. Persistence and degradability

Degradability: The product is expected to be slowly biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available on bioaccumulation.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT/vPvB: This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Other adverse effects: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Waste is classified as hazardous waste.

Waste from residues: EWC-code: 13 01 10

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SECTION 14: TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

UN-No: -

14.2. UN proper shipping name

Proper Shipping Name: -

14.3. Transport hazard class(es)

Class: -

14.4. Packing group

PG: -

14.5. Environmental hazards

Marine pollutant: -

Environmentally Hazardous substance: -

14.6. Special precautions for user

Special precautions: Not relevant.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk: Not relevant.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulation: Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, with amendments.
The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.
EH40/2005, Workplace exposure limits 2005, with amendments.
The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895).

15.2. Chemical Safety Assessment

CSA status: No chemical safety assessment has been carried out.

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SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

Handling of used oils:

Protect health - avoid prolonged and repeated skin contact. Wash with soap and water. Protect the environment - do not pollute drains, water courses or the soil. Contact your local authority for any used oil disposal instructions.

2, 3, 8, 12, 15, 16.

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Abbreviations and acronyms

used in the safety data sheet: PBT = Persistent, Bioaccumulative and Toxic.
vPvB = very Persistent and very Bioaccumulative.

Additional information: Classification according to Regulation (EC) No. 1272/2008: Calculation method.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

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