



The Ultimate Lubricant

73

DESCRIPTION:

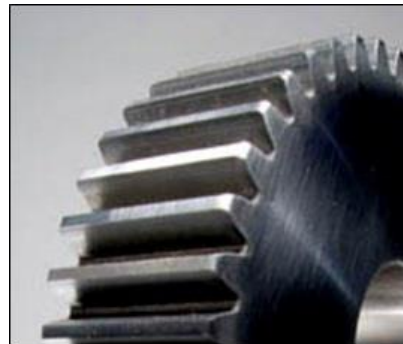
Omega 73 is a special, weather and water resistant open gear lubricant that clings tenaciously in position regardless of wind, rain, sleet, snow, sun, dust storms and other climatic phenomena. It provides the additional protection needed for gears and gear systems that ordinary gear greases fail to provide. Ordinary greases rapidly develop into collective deposits that harden and cause frictional-drag and excessive energy consumption. Omega 73 remains in position and keeps the system and the gears in silent mesh.



HYDRODYNAMIC STABILITY:

Omega 73 provides a hydrodynamic "liquid wedge" between gear wear areas. This 'bed' of highly micronized bearings provides minimum friction for intermeshing teeth and shafts / pinions.

Ordinary lubricant deposits build up and rapidly develop into hard spots that score, gel, gall or claw metal surfaces.



NOTE:

The criterion of a good gear lubricant is based on its ability to separate the loading from one pair of gears to another in a multiple gear set. All frictional surfaces within any one gear system - including the gear shaft bearings - are lubricated from one common source. If severe wear and its resulting downtime are to be avoided, no lubricant compromise can be made. Omega 73 is a specially developed waterproof open gear lubricant, designed to provide multiple protection to most open gear systems - without compromise!

CAPILLARY ACTION:

Omega 73 has a capillary action that spreads over metal surfaces and into wear areas. This action prevents or reduces: -

wiping
sliding

scuffing
pitting

galling
scoring

rippling
clawing

These wear aspects are common with the use of ordinary greases.

SUPERB ADHESIVENESS:

Ordinary greases are unable to resist the "Rate of slide relative to pressure & Centrifugal Force" in open gear mechanism applications. This causes the grease to squeeze out or fling off, leaving the metal surfaces exposed to corrosion, oxidation and metal-to-metal wear.

Omega 73 has an affinity for metal and clings to the gears!



APPLICATION:

Omega 73 has unlimited applications in open gear equipment: Cranes, hoists, wind-pumps, water pumps, winches, heavy equipment, timber drags, rail pulleys, funiculars, cable ways, ski lifts and thousands more.



EXTREME-PRESSURE & CORROSION RESISTANCE:

Omega 73 is loaded with special heavy-duty Extreme Pressure (EP) and anti-corrosion supplements. These resist:-

Shock	Loading	Pressure
Meshing	Brake seizure	Ratio alterations
Squeeze-out	Start-up pressure	Corrosion

EXTRA CUSHIONING PROPERTY:

Omega 73's cushioning property (due to its package of thickener and highly refined base fluid) provides extra protection to the open gears against metal-to-metal wear. In addition, this reduces the vibration and noise levels that are potentially damaging to the open gear units and annoying to the personnel working around them.

TEXTURE RETENTION:

Unlike ordinary greases that easily harden, Omega 73 retains its original soft texture. Ordinary greases thin down and squeeze out, even under slight temperature increases. Omega 73 retains its texture and stays in position. It seals out the dust that causes wear in locations where just such conditions prevail:

Construction	Mining	Stone Quarries
Dam Building	Farms	Land Reclamation

TYPICAL DATA:

TEST	ASTM TEST METHOD	TEST RESULT
Color	-	Black
Texture	-	Smooth & Tacky
Mineral Oil Base: -		
Viscosity, cSt at 100°C	D-455	72
Viscosity, cSt at 40°C	D-455	1,488
Viscosity Index, min.	D-2270	111
Flash point, °C (°F)	D-92	254 (489)
Pour point, °C (°F)	D-97	-12 (10.4)
Dropping Point, °C (°F)	D-2265	None
Shell Roll Stability, Point Change	D-1831	6.0
Timken OK load, lbs. min.	D-2509	40
Rust Prevention	D-1743	Pass
Oil Separation, 500 hrs.	D-1742	No trace
Worked Penetration @77°F	D-217	265-295
Operating Temperature Range °C (°F)	-	-8 to 200 (17.6 to 392)

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 73
Container size: 300 g, 5 kg, 15 kg & 55 kg ****Manufactured in Spain****

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

Application: Lubricating grease.

1.3. Details of the supplier of the safety data sheet

Supplier: EU importer: Sovereign Lubricants (UK) Ltd, Crowtrees Lane,
Rastrick, West Yorkshire, HD6 3LZ
T: 01484 718674 - F: 01484 400164
enquiries@sovereign-omega.co.uk
www.sovereign-omega.co.uk

Manufacturer: Omega Manufacturing Division
13th floor, Unit B, PAX Tower, 609 Eonju-ro
Gangnam-Gu, Seoul
Korea 06108
Tel:+82-2-2088-3560
Fax:+82-2-513-3567

1.4. Emergency telephone number

Emergency telephone: NHS: 111

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP: Not classified.

2.2. Label elements

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

2.3. Other hazards

Other: Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. The harmful effects may increase in used grease.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

The product contains: mineral oil and additives.

All substances in the product are either registered or exempt from registration under REACH.

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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: Seek medical attention and bring 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

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

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.

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid 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.
For waste disposal, see section 13.

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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 grease, particularly used grease. Always remove grease with soap and water or skin cleaning agent, never use organic solvents.

Technical measures: Work practice should minimise contact.

Technical precautions: When working with heated grease, 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

This/these substance(s) is/are subject to an Occupational Exposure Limit and may present an inhalation risk if present as dust or fume. This is not relevant to the current physical state of the product, which is not in a respirable form.

Occupational exposure limits:

<u>CAS-No.:</u>	<u>Chemical name:</u>	<u>As:</u>	<u>Exposure limits:</u>	<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
7782-42-5	Graphite, inhalable dust	-	10 mg/m3	TWA	-	EH40
1333-86-4	Carbon black	-	3.5 mg/m3	TWA	-	EH40
		-	7 mg/m3	STEL	15min	
1317-33-5	Molybdenum insoluble compounds	Mo	10 mg/m3	TWA	-	EH40
		-	20 mg/m3	STEL	15min	
1317-65-3	Limestone, total inhalable dust	-	10 mg/m3	TWA	-	EH40

Notes: EH40: EH40/2005.

8.2. Exposure controls

Engineering measures: Provide adequate ventilation. When working with heated grease, mechanical ventilation may be required. Provide access to washing facilities incl. soap, skin cleanser and fatty cream.

Personal protection: Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation use suitable respirator. Use respiratory equipment with particle filter, type P2.

Hand protection: Risk of contact: Wear protective gloves. Nitrile gloves are recommended. Breakthrough time: > 4h; Thickness: > 0.3 mm
Other types of gloves can be recommended by the glove supplier.

Eye protection: Risk of contact: Wear goggles/face shield.

Hygiene measures: Wash hands after handling.

Environmental Exposure Not available.

Controls:

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance: Grease.
Colour: Black.
Odour: Almost odourless.
pH: Not relevant.
Melting point / freezing point: > 180 °C
Boiling point: Not available.
Flash point: > 240 °C
Explosive limits Not available.
Vapour pressure: Not available.
Relative density: ~0.9
Solubility: Insoluble in water.
Decomposition temperature (°C): Not available.

9.2. Other information

Other data: Not available.

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

Hazardous Reactions: None known.

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.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

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 repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

Eye contact: Direct contact may irritate.

Ingestion: May irritate and cause malaise.

Specific effects: Prolonged or repeated contact with used grease may cause serious skin diseases, such as dermatitis. The harmful effects may increase in used grease.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity: Greases 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: No data available.

12.6. Other adverse effects

Other adverse effects: None known.

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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: 20 01 26

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: -

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

Transport in bulk: -

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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 information available.

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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.

The following sections contain revisions or new statements: 3, 8, 16

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The Omega Trade Mark is the property of ITW, Inc., and is used under license by ITW PP & F Korea Limited.

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

Key literature references and sources for data: None.

Additional information: None.

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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