Ωmega®
The Ultimate Lubricant

77

DESCRIPTION:

Omega 77 is a sophisticated, impact-resistant, chassis and bearing lubricant incorporated with the unique Omega “Megalite” to ensure longer service life. It provides an exceptional standard of lubrication to the endless variety of mechanical equipment in use today. This results in dramatically reduced inventories, downtime and maintenance cost.

COMFORMITY:

Omega 77 has constant conformity. This aspect provides the essential texture for precision applications and the necessary allowance for possible surface deformity in the bearing. This ensures that alignment remains constant.

COMPRESSIVE STRENGTH:

Omega 77 possesses almost infinite strength to support maximum loads without rupturing, disintegrating, crumbling or crushing. When subjected to compression, the unique Omega "Megalite" fortified in the lubricating film of Omega 77 serves as molecular bearings to keep frictional surfaces apart.

CAPILLARY TENDENCIES:

Omega 77 has active supplements that ensure total surface coverage.

CORROSION RESISTANCE:

Omega 77 is resistant to the acids formed by "mixed-greases" previously used in the equipment. Omega 77 is also resistant to acids formed by contaminants.

FUNCTIONS:

Omega 77 resists squeeze-out and thinning. Bearings must provide the support and constraint to a moving link of kinematic chains or mechanisms. The prime objective is to retain complete lubricant coverage and yet still provide maximum mechanical freedom. Ordinary greases are unable to withstand the everyday pressures of bearings and, subsequently, disintegrate rapidly leaving prime support areas in direct, metal-to-metal contact!

LOW COEFFICIENT OF FRICTION:

Omega 77 provides excellent reduction of friction between journal and bearing. This results in considerably lower energy consumption and wear - especially during the critical start-up period.

LOW THERMAL EXPANSION:

Omega 77 does NOT expand or contract as a result of temperature or climatic changes. Ordinary greases not only expand, but often form small hard congellants that rapidly transform into diamond hard abrasives. This causes heavy bearing drag which overloads equipment and increases the frictional energy requirements.

HIGH THERMAL CONDUCTIVITY AND ABSORPTION:

Omega 77 rapidly absorbs and dissipates heat. Frictional heat can have a marked effect on the running efficiency of the equipment. Ordinary greases tend to burn-up and this enables ‘hot-spots' to form. These develop into irreparable wear areas.

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ELASTICITY:

Ordinary greases tend to lubricate only those areas where they can be applied. This results in large areas, without lubrication, being subjected to damaging contact and eventual seizure! Omega 77 has a spreading ability that ensures ALL potential wear areas are covered.

METAL TYPES:

Omega 77 is ideal for application to the following metals and combinations of metals:

Aluminium	Cast Iron	Nickel
Antimony	Indium	Silver
Bismuth	Iron	Steel
Cadmium	Lead	Tin
Zinc		

TYPICAL DATA:

TEST	ASTM TEST METHOD	TEST RESULT		
		NLGI#2.5	NLGI#2	NLGI#00
Color	-	Red Sparkle	Red Sparkle	Red
Worked Penetration, at 25°C	D.217	250-280	265-295	400-430
Mineral Oil Specification -				
Viscosity, cSt at 100°C	D.455	30	30	19.2
Viscosity, cSt at 40°C	D.455	455	455	314
Viscosity Index	D.2270	110	10	60
Flash point, °C (°F)	D.92	254(489)	232(450)	242(468)
Pour point, °C (°F)	D.97	-10(14)	-12(10)	-12(10)
Dropping Point, °C (°F)	D.2265	190(374)	188(370)	N.A
Water Washout Characteristics	D.1264			
Grease Washout, % Loss		4.5	3	N.A.
Wheel Bearing Leakage, % Loss	D.1263	0.4	1.2	2.1
Oil Separation, % Loss	D.1742	2.0	3.0	N.A.
Oxidation Stability, lbs loss in 100 hrs	D.942	5 max.	5 max.	5 max.
Rust Prevention	D.1743	Pass	Pass	Pass
Roll Stability, Point Change	D.1831	N.A.	2.19	N.A.
Timken, OK Load, kg	D.2509	23	23	23
Temperature Range, °C(°F)	-	- 7 to 150 (20 to 302)	-7 to 149 265-295	-7 to 149 400-430

ITW PERFORMANCE POLYMERS & FLUIDS

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SAFETY DATA SHEET

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

1.1. Product identifier

Product name: Omega 77

This safety data sheets covers the following products:
Omega 77 NLGI #00
Omega 77 NLGI #2
Omega 77 NLGI #2.5

Container size: 400 g, 5 kg, 15 kg & 55 kg

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

Application: Grease.

1.3. Details of the supplier of the safety data sheet

Supplier: GB 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: 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

Further information can be obtained from: magna@magnagroup.com

1.4. Emergency telephone number

Emergency telephone: Call a Poison Center, emergency number or doctor/physician.
NHS: 111

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP: The product is classified:
Skin Irrit. 2;H315 - Eye Irrit. 2;H319

2.2. Label elements

Warning

H315	Causes skin irritation.
H319	Causes serious eye irritation.
P280	Wear eye protection and gloves.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P362	Take off contaminated clothing.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of contents/container in accordance with local regulations.

2.3. Other hazards

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

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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

The product contains: mineral oil (DMSO < 3% (IP 346)) and additives .

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

CLP:

%:	CAS-No.:	EC No.:	REACH Reg. No:	Chemical name:	Hazard classification:	Notes:
1-2	-	945-873-7	-	Zinc alkyldithiophosphate	Skin Irrit. 2;H315 Eye Dam. 1;H318	
1	1310-66-3	603-454-3	-	Lithium Hydroxide	Acute Tox. 4;H302 Skin Corr. 1B;H314 Eye Dam. 1;H318	

References:

The full text for all hazard statements is displayed in section 16.

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: In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions. Remove contaminated clothes and rinse skin thoroughly with water.

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 1-2 glasses of water. Keep person under observation. If uncomfortable: Transportation to hospital. Bring along these instructions. Do not induce vomiting.

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.
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.

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: Avoid discharge into 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.

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. Keep the workplace clean.
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):	Not relevant.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

No occupational exposure limit assigned.

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 relevant standards and in discussion with the supplier of the personal protective equipment.
Respiratory equipment:	Respiratory protection not required. In case of inadequate ventilation use suitable respirator. Use respiratory equipment with particle filter, type P2.
Hand protection:	For prolonged or repeated skin contact use suitable protective gloves. Nitrile gloves or rubber gloves are recommended. Breakthrough time: > 4 hThickness: > 0.3 mm Other types of gloves can be recommended by the glove supplier. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.
Eye protection:	Risk of contact: Wear goggles/face shield.
Hygiene measures:	Wash hands after contact. Wash contaminated clothing before reuse.
Environmental Exposure Controls:	Not available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	Grease.
Form:	Paste.
Colour:	Red.
Odour:	Almost odourless.
Odour threshold:	Not available.
pH:	Not available.
Melting point / freezing point:	> 180 °C
Boiling point:	Not available.
Flash point:	> 240 °C
Evaporation rate:	Not available.
Explosive limits	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	~0,9
Solubility:	Insoluble in water.
Partition coefficient (n-octanol/water):	Not available.
Auto-ignition temperature (°C):	Not available.
Decomposition temperature (°C):	Not available.
Viscosity:	Not available.
Explosive properties:	Non-explosive
Oxidising properties:	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 None specific.

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 grease.

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:	Causes skin irritation.
Serious eye damage/irritation:	Causes serious eye irritation.
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 contact may cause dryness of the skin. Prolonged or frequent contact may cause redness, itching, irritation, eczema, skin cracking and oil acne.

Eye contact: Direct contact may irritate. May cause temporary eye irritation.

Ingestion: May irritate and cause malaise.

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

11.2. Information on other hazards

Endocrine disrupting properties: The product does not contain any substance identified as having endocrine disrupting properties.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity: Greases are generally hazardous to the environment. Not classified as dangerous to the environment. The product is immiscible with water and will spread on the water surface.

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. Endocrine disrupting properties

Endocrine disrupting properties: The product does not contain any substance identified as having endocrine disrupting properties.

12.7. 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: 20 01 26

Contaminated packaging: Dispose of contaminated packings as residue.

SECTION 14: TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/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: None known.

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: UK Statutory Instruments, 2021 No. 904, CONSUMER PROTECTION ENVIRONMENTAL PROTECTION HEALTH AND SAFETY. The REACH etc. (Amendment) Regulations 2021.
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.
The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019 (SI 2019 No. 720), as amended.
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.

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.

The following sections contain revisions or new statements: 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 15, 16.

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

Additional information:

All components of this product are listed or exempt from listing on the TSCA inventory. Classification according to Regulation (EC) No. 1272/2008: Calculation method.

Wording of H-statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

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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