



The Ultimate Lubricant

588



Nonfood Compounds
Category Code : H1
Registration Number : 150913

DESCRIPTION:

Omega 588 Synthetic FG Machinery Oil is formulated with synthetic polyalphaolefin (PAO) and a package of FDA approved additives to offer versatile applications on processing machineries and systems in the food & beverage and pharmaceutical industries. Omega 588 is NSF H1-listed and complies with the stringent Halal and Kosher quality standards.

HALAL & KOSHER CERTIFIED:

Omega 588 is manufactured according to ISO 21469 which supports producers who adopt Hazard Analysis and Critical Control Points (HACCP) and Good Manufacturing Practice (GMP) programs. HACCP and GMP are both

systems intended to ensure the safety of food, chemicals and pharmaceuticals. GMP is the "first step" to food safety, as a series of principles to be fulfilled to ensure that products meet stringent requirements of safety and quality. It can be one of the components of HACCP, which is a systematic approach to production that is designed to prevent hazards from occurring.

Omega 588 is also manufactured in accordance with the strict Halal and Kosher quality standards. A designated production line/area is used to manufacture Omega 588. This special oil production line/area is completely segregated to avoid cross-contamination caused by any prohibited materials according to the requirements of these quality standards.



ADVANCED SYNTHETIC FORMULATION:

Omega 588 is formulated with synthetic shear-stable PAO fluid with high viscosity index. Viscosity to temperature relation is important in choosing an effective lubricating fluid for any machine exposed to a wide range of operating temperatures. As compared with the conventional mineral based food grade oils, Omega 588 has relatively higher viscosity at temperatures above 100°C (100 degree Celsius), reinforcing metal protection at high temperatures. At temperatures below 0°C (zero degree Celsius), it has lower viscosity and better fluidity, reducing friction and energy consumption. This performance advantage over the food grade mineral oils alone can typically reduce the operation costs by at least ten percent.

APPLICATIONS:

Omega 588 will outlast and outperform any food grade mineral oil in any application. Omega 588 can be used in compressors, hydraulic and circulating systems, low- to medium-loaded bearings, lightly loaded gears, vacuum pumps, and valves where food grade oil is required. Omega 588 ultimately extends the re-lubrication interval and reduces the maintenance costs of various machines in: Bakeries, Beverage Bottling and Canning, Breweries, Cosmetics Manufacturing, Dairy Products, Fish and Seafood Processing, Fruit and Vegetable processing, Food and Beverage Containers, Meat and Poultry Processing, Pet Food and Animal Feed, Pharmaceutical Manufacturing, Prepared & Snack Foods, etc.

DESIGNED FOR VERSATILITY:

Fortified with a proprietary package of additives including anti-wear agent, corrosion & oxidation inhibitors, and foam depressant, Omega 588 is quality designed to offer multi-purpose lubrication with the following physical and chemical characteristics:

- Excellent thermal, oxidative and hydrolytic stability – minimizing the risk of formation of acidic and/or carbon deposits which accelerate the degradation of lubricating oils.
- Excellent wear & corrosion protection – maintaining or even extending the service life of machinery.
- Excellent water separation and air release properties – optimizing the efficiency of machine operation and lowering the risk of premature machine failure.
- Odorless & non-toxic – providing an operator-friendly “clean” work environment, which is particularly important in the food and beverage industry.
- Compatibility with all general types of seals and coatings – lowering the risk of oil leakage.

With these outstanding benefits, wide service temperature range and the compliance with various quality standards, Omega 588 provides reliable and versatile lubrication solution to maintenance professionals in virtually all food and food-related industries.

TYPICAL DATA:

TEST	ASTM TEST METHOD	TEST RESULT		
		ISO VG32	ISO VG68	ISO VG220
Appearance	Visual	Clear yellow	Clear yellow	Clear yellow
Density, kg/L @ 15°C	D-1298	0.835	0.843	0.847
Viscosity, cSt @ 40°C	D-445	30.3	67.6	220
Viscosity, cSt @ 100°C	D-445	6.1	11.3	30
Viscosity Index	D-2270	155	160	177
Flash Point, COC, °C	D-92	242	257	254
Pour Point °C	D-97	-48	-45	-34
Total Acid Number, mg KOH/g	D-664	0.8	0.8	0.8
Four Ball Wear Test, mm	D-4172	0.5	0.32	0.31
Welding Load, Kg	D-2783	160	200	160
Demulsibility @ 54°C, minutes	D-1401	<10	<10	<9
Rust-Preventing Characteristics	D-665B	Pass	Pass	Pass
Copper Strip Corrosion	D-130	1a	1a	1a
Recommended Service Temperature, °C	-	-35 to 160 (Minus thirty-five to one hundred and sixty)		-25 to 160

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 588
Omega 588 VG 32
Omega 588 VG 68
Omega 588 VG 220

Container size: 5L / 20L ****Manufactured in Germany****

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

Application: Hydraulic oil.

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: 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
www.magnagroup.com

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, eczema, skin cracking and oil acne. The harmful effects may increase in used oil.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

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

No classified ingredients, or those having occupational exposure limits, present above the levels of disclosure. 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: Do not induce vomiting. Rinse mouth. If symptoms persist, get medical attention.

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.

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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.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Observe good chemical hygiene practices. Avoid inhalation of oil mist and contact with skin and eyes. 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: Work practice should minimise contact.

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: Store in tightly closed original container.

Storage conditions: Store in a cool and well-ventilated place.

7.3. Specific end use(s)

Specific use(s): No information available.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

No occupational exposure limit assigned.

8.2. Exposure controls

Engineering measures: Provide adequate ventilation. 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 Controls: Not available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<u>Appearance:</u>	Liquid.
<u>Colour:</u>	Transparent. / Light yellow.
<u>Odour:</u>	Weak. Characteristic.
<u>Odour threshold:</u>	Not determined.
<u>pH:</u>	Not applicable.
<u>Melting point / freezing point:</u>	Not determined.
<u>Boiling point:</u>	Not determined.
<u>Flash point:</u>	242 - 257 °C (ASTM D-92, COC)
<u>Evaporation rate:</u>	Not applicable.
<u>Flammability (solid, gas):</u>	Not determined.
<u>Explosive limits</u>	Not determined.
<u>Vapour pressure:</u>	Not applicable.
<u>Vapour density:</u>	Not applicable.
<u>Relative density:</u>	0.835 - 0.849 g/cm ³ @ 15.6 °C (ASTM D1298)
<u>Solubility:</u>	Insoluble in water.
<u>Partition coefficient (n-octanol/water):</u>	Not determined.
<u>Auto-ignition temperature (°C):</u>	Not determined.
<u>Decomposition temperature (°C):</u>	Not determined.
<u>Viscosity:</u>	30.3 mm ² /s @ 40°C (ASTM D-445) Omega 588 VG 32 65.5 mm ² /s @ 40°C (ASTM D-445) Omega 588 VG 68 219.7 mm ² /s @ 40°C (ASTM D-445) Omega 588 VG 220
<u>Explosive properties:</u>	Not applicable.
<u>Oxidising properties:</u>	Not applicable.
<u>9.2. Other information</u>	
<u>Other data:</u>	Organic solvents. 0% Volatile Organic Compound (VOC): 0%

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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

Hazardous Reactions: None known.

10.4. Conditions to avoid

Conditions to avoid None known.

10.5. Incompatible materials

Incompatible materials: Strong oxidising substances.

10.6. Hazardous decomposition products

Hazardous decomposition products: None known.

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 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 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: Not Classified as PBT/vPvB by current EU criteria.

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 11

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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: -

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

Transport in bulk: -

SECTION 15: REGULATORY INFORMATION

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

National regulation: 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.
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.

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.

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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