



The Ultimate Lubricant

641



Nonfood Compounds
Category Code : H1
Registration Number : 147596

DESCRIPTION:

Omega 641 Food-Grade HTLR Chain Oil is a supreme specialty synthetic “high temperature low residue” lubricating solution designed for chain systems frequently exposed to high-temperatures in food & beverage industry. It is formulated using a pure, low-residue, thermal-stable synthetic base fluid together with a superior performance load-carrying & anti-wear additives package. This innovative chain oil is approved by NSF (H1-listed) and enables a versatile array of clean lubrication meeting and exceeding the stringent requirements demanded by the maintenance professionals in the food & beverage industry.



KEY APPLICATIONS:

Being NSF H1-listed for incident food contact, **Omega 641** is recommended for protecting and lubricating pin/roller chains of industrial bakery ovens (e.g. continuous conveyor ovens and tunnel & tray ovens) or chain units of heat treatment food & beverage processing equipment such as beverage can lines.

Omega 641 is also a reliable clean lubrication solution for chain units in non-food industry such as conveyor chains in drying ovens, tenter frame ovens, paint curing ovens, and similar equipment exposed to high temperature operating conditions.



EXCELLENT HIGH-TEMPERATURE PERFORMANCE:

Omega 641 is formulated with purely synthetic base fluid and a proprietary package of performance additives for high-temperature applications. It is synthetically engineered to guarantee outstanding lubrication performance at elevated temperatures:

- Excellent thermal & oxidative stability – ensuring high performance up to 280°C with minimal lubricant deterioration.
- Very low volatility – lower evaporation rate, less oil consumption and extended re-lubrication cycle.
- Exceptional lubricity and film strength to protect the chain units against wear and friction.
- Very tenacious, high adhesion, and long lasting, simply “stays-in-place”.
- Low smoke emission – improve operational safety and satisfy high cleanliness production requirements.
- Reinforced with anti-wear and load-carrying additives to offer multi-protection to the chain components.

EXTRA-LOW RESIDUE:

When exposed to high temperatures, conventional chain oils break down, degrade and form deposits such as varnish or sludge in the chain units. This kind of residue build-up, which is difficult to remove, is detrimental to the chain units because it will:

- a. Clog the internal links of the chains, interrupting the smooth operation of the chain units and increasing the power input required to drive the chain units,
- b. Increase the loading and stress on the chains, accelerating the wear rate of the chains and leading to premature chain failure, and
- c. Potentially increase the risk of unscheduled production break-down if the two points above are not treated properly.

Due to the polar nature of the synthetic base fluid formulated with, Omega 641 offers excellent detergency and is almost residue-free. With Omega 641, maintenance professionals do not have to worry about cleaning large chunk of deposits and coping with unexpected production breakdown.

TYPICAL DATA:

| TEST | ASTM TEST METHOD | TEST RESULT |
|---|------------------|--------------|
| Appearance | - | *Light Amber |
| Density, kg/L @ 25°C | D-1298 | 0.972 |
| Viscosity, cSt @ 40°C | D-445 | 220 |
| Viscosity, cSt @ 100°C | | 18.5 |
| Viscosity Index | D-2270 | 96 |
| Flash Point, °C | D-92 | 315 |
| Pour Point, °C | D-97 | -25 |
| Four Ball Wear, Scar Diameter (mm) | D-4172 | 0.64 |
| RBOT, Oxidation Lifetime (minutes) | D-2272 | 1030 |
| Weight Loss, % (22 hrs, 204°C) | - | 2.0 |
| Recommended Operating Temperature Range, °C | - | -10 to 280 |

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

* UV light may discolor the product. This happens quickly in sunlight and more slowly in office fluorescent lighting. Depending on the wavelength, a UV lamp would also make the product shift to a darker yellow-amber. Although the color change is quite noticeable, it has no effect on the performance of the lubricant.

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Supersedes date: 2016-06-10
Product No.:

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Last revised date: 2019-10-10
SDS-ID: GB-EN/3.0

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

1.1. Product identifier

Product name: Omega 641
Container size: 5 l, 20 l

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

Application: Chain 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: NHS: 111

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 frequent contact may cause redness, itching, eczema and skin cracking. Oil spills are generally hazardous to the environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

The product contains: synthetic oils 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> |
|-----------|-----------------|----------------|------------------------|--|-------------------------------|---------------|
| 95-100 | 67762-52-1 | 267-021-7 | - | Fatty acids, C5-9, hexaesters with dipentaerythritol | - | |

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

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.

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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.
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 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): Not relevant.

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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 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> | Risk of contact: 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>Hygiene measures:</u> | Wash hands after handling. Wash contaminated clothing before reuse. |
| <u>Environmental Exposure Controls:</u> | Not available. |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | |
|--|--------------------------|
| <u>Appearance:</u> | Clear, yellowish liquid. |
| <u>Odour:</u> | Characteristic. |
| <u>pH:</u> | not relevant |
| <u>Melting point / freezing point:</u> | < -30°C |
| <u>Boiling point:</u> | not available |
| <u>Flash point:</u> | > 200°C |
| <u>Solubility:</u> | Immiscible with water |

9.2. Other information

| | |
|--------------------|--|
| <u>Other data:</u> | Kinematic viscosity: 220 mm ² /s (40°C) |
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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity: None known.

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

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, eczema and skin cracking.

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. The harmful effects may increase in used oil.

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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: No data available.

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 02 06

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: None known.

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

Transport in bulk: Not relevant.

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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 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.

The following sections contain revisions or new statements: 1, 2, 8, 12, 15, 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.

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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