

20086 Motorbike Gear Oil 75W-90 1L

Liqui Moly GmbH

Chemwatch: **84-56325** Version No: **2.1.1.1**

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Chemwatch Hazard Alert Code: 1

Issue Date: 28/11/2019 Print Date: 29/11/2019 S.GHS.USA.EN

SECTION 1 IDENTIFICATION

Product Identifier

| Product name | 20086 Motorbike Gear Oil 75W-90 1L |
|-------------------------------|------------------------------------|
| Synonyms | Not Available |
| Other means of identification | Not Available |

Recommended use of the chemical and restrictions on use

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

| Registered company name | Liqui Moly GmbH | |
|-------------------------|---|--|
| Address | erg-Wieland-Strasse 4 Ulm D-89081 Germany | |
| Telephone | +49 731 1420 0 | |
| Fax | +49 731 1420 82 | |
| Website | http://www.liqui-moly.com/ | |
| Email | Not Available | |

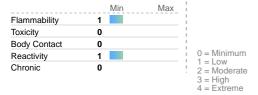
Emergency phone number

| • | | |
|-----------------------------------|--------------------------------------|--|
| Association / Organisation | INFOTRAC | |
| Emergency telephone numbers | +1800 535 5053 (US, Canada & Mexico) | |
| Other emergency telephone numbers | +1 352 323 3500 (International) | |

SECTION 2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

CHEMWATCH HAZARD RATINGS





Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

| Classification | Chronic Aquatic Hazard Category 4 | |
|---------------------|---|--|
| Label elements | | |
| Hazard pictogram(s) | Not Applicable | |
| SIGNAL WORD | NOT APPLICABLE | |
| Hazard statement(s) | | |
| H413 | May cause long lasting harmful effects to aquatic life. | |

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

| P273 Avoid release to the environment. | • | ٠, | |
|--|---|------|--------------------------------------|
| | | P273 | AVOID TELEBOOK TO THE CHANGING HICK. |

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Precautionary statement(s) Response

Not Applicable

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Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|---------------|-----------|--|
| 68037-01-4 | >60 | 1-decene homopolymer, hydrogenated |
| 64742-65-0. | 1-5 | paraffinic distillate, heavy, solvent-dewaxed (severe) |
| Not Available | 1-10 | Ingredients determined not to be hazardous |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 FIRST-AID MEASURES

Description of first aid measures

| Eye Contact | If this product comes in contact with eyes: • Wash out immediately with water. • If irritation continues, seek medical attention. • Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
|--------------|--|
| Skin Contact | If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation. |
| Inhalation | If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary. |
| Ingestion | Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. |

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media

- Foam.
- ▶ Dry chemical powder.
- ► BCF (where regulations permit).
- ▶ Carbon dioxide.

Special hazards arising from the substrate or mixture

| Fire Incompatibility | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result | |
|--|--|--|
| Special protective equipment and precautions for fire-fighters | | |

| The state of the s | | |
|--|---|--|
| Fire Fighting | Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. | |
| Fire/Explosion Hazard | ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon dioxide (CO2) other pyrolysis products typical of burning organic material. May emit poisonous fumes. | |

SECTION 6 ACCIDENTAL RELEASE MEASURES

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See section 8

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Environmental precautions

See section 12

Methods and material for containment and cleaning up

| Minor Spills | Slippery when spilt. In Remove all ignition sources. In Clean up all spills immediately. In Avoid breathing vapours and contact with skin and eyes. In Control personal contact with the substance, by using protective equipment. |
|--------------|--|
| Major Spills | Slippery when spilt. Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| • | |
|-------------------|--|
| Safe handling | Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. |
| Other information | Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area. |

Conditions for safe storage, including any incompatibilities

| Suitable container | Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks. |
|-------------------------|--|
| Storage incompatibility | Avoid reaction with oxidising agents |

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|--|--|------------|------------------|------------------|------------------------|
| US NIOSH Recommended Exposure Limits (RELs) | paraffinic distillate, heavy, solvent-dewaxed (severe) | Heavy mineral oil mist, Paraffin oil mist, White mineral oil mist | 5 mg/m3 | 10 mg/m3 | Not Available | Not Available |
| US ACGIH Threshold Limit Values (TLV) | paraffinic distillate, heavy, solvent-dewaxed (severe) | Mineral oil, excluding metal working fluids - Pure, highly and severely refined | 5 mg/m3 | Not Available | Not Available | TLV® Basis: URT irr |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | paraffinic distillate, heavy, solvent-dewaxed (severe) | Oil mist, mineral | 5 mg/m3 | Not Available | Not Available | Not Available |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|--|---|-----------|-------------|-------------|
| 1-decene homopolymer, hydrogenated | Decene, 1-, homopolymer, hydrogenated | 30 mg/m3 | 330 mg/m3 | 2,000 mg/m3 |
| paraffinic distillate, heavy, solvent-dewaxed (severe) | Pump oil; (petroleum distillates, solvent de-waxed heavy paraffinic | 140 mg/m3 | 1,500 mg/m3 | 8,900 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|--|---------------|---------------|
| 1-decene homopolymer, hydrogenated | Not Available | Not Available |
| paraffinic distillate, heavy, solvent-dewaxed (severe) | 2,500 mg/m3 | Not Available |

Exposure controls

| | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can |
|-------------------------|---|
| | be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. |
| Appropriate engineering | The basic types of engineering controls are: |
| controls | Process controls which involve changing the way a job activity or process is done to reduce the risk. |

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically

"adds" and "removes" air in the work environment.

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Personal protection ▶ Safety glasses with side shields ► Chemical goggles. Eye and face protection Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Skin protection See Hand protection below The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when Hands/feet protection making a final choice. Personal hygiene is a key element of effective hand care. Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber **Body protection** See Other protection below Overalls. Other protection P.V.C. apron. Barrier cream.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|-------------------------|
| up to 10 x ES | A-AUS P2 | - | A-PAPR-AUS / Class 1 P2 |
| up to 50 x ES | - | A-AUS / Class 1 P2 | - |
| up to 100 x ES | - | A-2 P2 | A-PAPR-2 P2 ^ |

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- ► Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | Yellow liquid with characteristic odour. | | |
|--|--|---|-----------------------|
| Physical state | Liquid | Relative density (Water = 1) | 0.855 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | -54 | Viscosity (cSt) | 85 @ 40C, 14.5 @ 100C |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | 200 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Applicable | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water | Not Available | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

| Reactivity | See section 7 |
|------------|---------------|
| | |

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▶ Unstable in the presence of incompatible materials. Chemical stability Product is considered stable. ▶ Hazardous polymerisation will not occur. Possibility of hazardous See section 7 reactions Conditions to avoid See section 7 Incompatible materials See section 7 Hazardous decomposition See section 5 products

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

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| Inhaled | Inhalation hazard is increased at higher temperatures. Not normally a hazard due to non-volatile nature of produ | uct | | |
|-------------------------------|--|---|--|--|
| Ingestion | The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. | | | |
| Skin Contact | models). Nevertheless, good hygiene practice requires the setting. Open cuts, abraded or irritated skin should not be expose Entry into the blood-stream, through, for example, cuts, a | The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. | | |
| Еуе | Although the liquid is not thought to be an irritant (as clas characterised by tearing or conjunctival redness (as with | sified by EC Directives), direct contact with the eye may produce transient discomfort windburn). | | |
| Chronic | Long-term exposure to the product is not thought to prod models); nevertheless exposure by all routes should be r | uce chronic effects adverse to the health (as classified by EC Directives using animal ninimised as a matter of course. | | |
| 20086 Motorbike Gear Oil | TOXICITY | IRRITATION | | |
| 75W-90 1L | Not Available | Not Available | | |
| | TOXICITY | IRRITATION | | |
| 1-decene homopolymer, | dermal (rat) LD50: >2000 mg/kg ^[1] | Eye*(rabbit):0-4/110.0-nonirritant | | |
| hydrogenated | Inhalation (rat) LC50: 0.9 mg/l4 h ^[1] | Skin**(rabbit)-0.5/8.0-nonirritant | | |
| | Oral (rat) LD50: >2000 mg/kg ^[1] | | | |
| | TOXICITY | IRRITATION | | |
| paraffinic distillate, heavy, | Dermal (rabbit) LD50: >2000 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | | |
| solvent-dewaxed (severe) | Inhalation (rat) LC50: >5.3 mg/l4 h ^[1] | Skin: no adverse effect observed (not irritating) ^[1] | | |
| | Oral (rat) LD50: >5000 mg/kg ^[2] | | | |
| Legend: | Value obtained from Europe ECHA Registered Substa specified data extracted from RTECS - Register of Toxic | nnces - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise | | |

specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

1-DECENE HOMOPOLYMER. HYDROGENATED

PARAFFINIC DISTILLATE.

(SEVERE)

HEAVY. SOLVENT-DEWAXED

For poly-alpha-olefins (PAOs):

PAOs are highly branched, isoparaffinic chemicals produced by oligomerisation of 1-octene, 1-decene and/or 1-dodecene. The crude polyalphaolefin mixture is then distilled into appropriate product fractions to meet specific viscosity specifications and hydrogenated. In existing data, there appears to be no data to show that these structural analogs cause health effects. In addition, there is evidence in the literature that alkanes with 30 or more carbon atoms are unlikely to be absorbed when given by mouth. (estimated) * Evidence of conjunctival changes ** No evidence of tissue damage [Inland Vacuum Industries] ^ US EPA HPV Challenge program

October 2002

No significant acute toxicological data identified in literature search.

Animal studies indicate that normal, branched and cyclic paraffins are absorbed from the gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent than iso- or cyclo-paraffins.

The major classes of hydrocarbons are well absorbed into the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with fats in the diet.

The materials included in the Lubricating Base Oils category are related from both process and physical-chemical perspectives;

- The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of processing the oil has undergone, since: The adverse effects of these materials are associated with undesirable components, and
- The levels of the undesirable components are inversely related to the degree of processing;
- Distillate base oils receiving the same degree or extent of processing will have similar toxicities;
- The potential toxicity of residual base oils is independent of the degree of processing the oil receives. The reproductive and developmental toxicity of the distillate base oils is inversely related to the degree of processing.

Unrefined & mildly refined distillate base oils contain the highest levels of undesirable components, have the largest variation of hydrocarbon molecules and have shown the highest potential cancer-causing and mutation-causing activities. Highly and severely refined distillate base oils are produced from unrefined and mildly refined oils by removing or transforming undesirable components.

For highly and severely refined distillate base oils:

In animal studies, the acute, oral, semilethal dose is >5g/kg body weight and the semilethal dose by skin contact is >2g/kg body weight. The semilethal concentration for inhalation is 2.18 to >4 mg/L. The materials have varied from "non-irritating" to "moderately irritating" when tested for skin and eye irritation. Testing for sensitisation has been negative

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

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| Acute Toxicity | × | Carcinogenicity | × |
|-----------------------------------|---|--------------------------|---|
| Skin Irritation/Corrosion | × | Reproductivity | × |
| Serious Eye Damage/Irritation | × | STOT - Single Exposure | × |
| Respiratory or Skin sensitisation | × | STOT - Repeated Exposure | × |
| Mutagenicity | × | Aspiration Hazard | × |

Legend:

★ - Data either not available or does not fill the criteria for classification

🧪 – Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| 20086 Motorbike Gear Oil 75W-90 1L | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--|------------------|--------------------|---|------------------|------------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| 1-decene homopolymer, hydrogenated | LC50 | 96 | Fish | 0.121mg/L | 3 |
| nydrogenated | EC50 | 96 | Algae or other aquatic plants | 0.121mg/L | 3 |
| | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | >100mg/L | 2 |
| paraffinic distillate, heavy, solvent-dewaxed (severe) | EC50 | 48 | Crustacea | >10-mg/L | 2 |
| Solvent-dewaxed (Severe) | EC50 | 96 | Algae or other aquatic plants | >1000mg/L | 1 |
| | NOEC | 504 | Crustacea | >1mg/L | 1 |
| Legend: | | , | Registered Substances - Ecotoxicological Informa EPA, Ecotox database - Aquatic Toxicity Data 5. E | , | |

May cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOT discharge into sewer or waterways

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------------------------------|-------------------------|------------------|
| 1-decene homopolymer, hydrogenated | LOW | LOW |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|------------------------------------|-----------------------|
| 1-decene homopolymer, hydrogenated | HIGH (LogKOW = 5.116) |

Mobility in soil

| Ingredient | Mobility |
|------------------------------------|------------------|
| 1-decene homopolymer, hydrogenated | LOW (KOC = 1724) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- ► Reduction
- ▶ Reuse
- ► Recycling
- ► Disposal (if all else fails)

Product / Packaging disposal

- This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains
- ▶ It may be necessary to collect all wash water for treatment before disposal.
- ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- ▶ Where in doubt contact the responsible authority.
- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- ► Consult State Land Waste Authority for disposal.
- ▶ Bury or incinerate residue at an approved site.
- ▶ Recycle containers if possible, or dispose of in an authorised landfill.

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SECTION 14 TRANSPORT INFORMATION

Labels Required

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Marine Pollutant

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

1-DECENE HOMOPOLYMER, HYDROGENATED IS FOUND ON THE FOLLOWING REGULATORY LISTS

US DOE Temporary Emergency Exposure Limits (TEELs)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED (SEVERE) IS FOUND ON THE FOLLOWING REGULATORY LISTS

IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International FOSFA List of Banned Immediate Previous Cargoes

US - Alaska Limits for Air Contaminants

US - California Permissible Exposure Limits for Chemical Contaminants

US - Hawaii Air Contaminant Limits

US - Idaho - Limits for Air Contaminants

US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits

US - Minnesota Permissible Exposure Limits (PELs)

US - Oregon Permissible Exposure Limits (Z-1)

US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Michigan Exposure Limits for Air Contaminants

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air

US - Washington Permissible exposure limits of air contaminants

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants

US ACGIH Threshold Limit Values (TLV)

US AIHA Workplace Environmental Exposure Levels (WEELs)

US Chemical Footprint Project - Chemicals of High Concern List

US DOE Temporary Emergency Exposure Limits (TEELs)

US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible **Bulk Liquid Cargoes**

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SECTION 311/312 HAZARD CATEGORIES

| Flammable (Gases, Aerosols, Liquids, or Solids) | |
|--|----|
| Gas under pressure | |
| Explosive | |
| Self-heating Self-heating | |
| Pyrophoric (Liquid or Solid) | |
| Pyrophoric Gas | |
| Corrosive to metal | |
| Oxidizer (Liquid, Solid or Gas) | |
| Organic Peroxide | |
| Self-reactive | No |
| In contact with water emits flammable gas | No |
| Combustible Dust | No |
| Carcinogenicity | No |
| Acute toxicity (any route of exposure) | No |
| Reproductive toxicity | |
| Skin Corrosion or Irritation | |
| Respiratory or Skin Sensitization | |
| Serious eye damage or eye irritation | |
| Specific target organ toxicity (single or repeated exposure) | |
| Aspiration Hazard | |
| Germ cell mutagenicity | |
| Simple Asphyxiant | |
| Hazards Not Otherwise Classified | |

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None Reported

State Regulations

US. CALIFORNIA PROPOSITION 65

None Reported

National Inventory Status

| National inventory Status | |
|-------------------------------|---|
| National Inventory | Status |
| Australia - AICS | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (1-decene homopolymer, hydrogenated; paraffinic distillate, heavy, solvent-dewaxed (severe)) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - ARIPS | Yes |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION

| Revision Date | 28/11/2019 |
|---------------|------------|
| Initial Date | 28/11/2019 |

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

 ${\sf PC-STEL} : {\sf Permissible \ Concentration-Short \ Term \ Exposure \ Limit}$

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index

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