

20198, 20200, 20355, 22172 SPECIAL TEC V 0W-20 1L, 5L, 60L, 1000L Liqui Moly GmbH

Chemwatch: 5406-91
Version No: 3.1.1.1
Safety Data Sheet according to WHMIS 2015 requirements

Chemwatch Hazard Alert Code: 2

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S.GHS.CAN.EN

SECTION 1 Identification

Product Identifier

| | |
|-------------------------------|---|
| Product name | 20198, 20200, 20355, 22172 SPECIAL TEC V 0W-20 1L, 5L, 60L, 1000L |
| Synonyms | Not Available |
| Other means of identification | Not Available |

Recommended use of the chemical and restrictions on use

| | |
|--------------------------|---|
| Relevant identified uses | Use according to manufacturer's directions. |
|--------------------------|---|

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

| | |
|-------------------------|---|
| Registered company name | Liqui Moly GmbH |
| Address | Jerg-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

NFPA 704 diamond



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)

Canadian WHMIS Symbols



| | |
|----------------|---|
| Classification | Eye Irritation Category 2A, Skin Sensitizer Category 1, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Chronic Aquatic Hazard Category 3 |
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Label elements

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| Hazard pictogram(s) | |
| Signal word | Warning |

Hazard statement(s)

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| H319 | Causes serious eye irritation. |
| H317 | May cause an allergic skin reaction. |
| H336 | May cause drowsiness or dizziness. |

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| H412 | Harmful to aquatic life with long lasting effects. |
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Physical and Health hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

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|-------------|--|
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P261 | Avoid breathing mist/vapours/spray. |
| P273 | Avoid release to the environment. |

Precautionary statement(s) Response

| | |
|-----------------------|--|
| P321 | Specific treatment (see advice on this label). |
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER/doctor/physician/first aider/if you feel unwell. |

Precautionary statement(s) Storage

| | |
|------------------|--|
| P405 | Store locked up. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |

Precautionary statement(s) Disposal

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| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
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SECTION 3 Composition / information on ingredients**Substances**

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|--------------|-----------|--|
| 64742-54-7. | >60 | <u>paraffinic distillate, heavy, hydrotreated (severe)</u> |
| 1190625-94-5 | <2 | <u>(C14-16-18)alkylphenol</u> |
| 36878-20-3 | <2 | <u>nonylated diphenylamines</u> |
| 93819-94-4 | <1 | <u>zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate</u> |

SECTION 4 First-aid measures**Description of first aid measures**

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| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation. |
| Inhalation | <ul style="list-style-type: none"> If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor. |
| Ingestion | <ul style="list-style-type: none"> If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice. Avoid giving milk or oils. Avoid giving alcohol. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. |

Indication of any immediate medical attention and special treatment needed

For petroleum distillates

In case of ingestion, gastric lavage with activated charcoal can be used promptly to prevent absorption - decontamination (induced emesis or lavage) is controversial and should be considered on the merits of each individual case; of course the usual precautions of an endotracheal tube should be considered prior to lavage, to prevent aspiration.

Continued...

- Individuals intoxicated by petroleum distillates should be hospitalized immediately, with acute and continuing attention to neurologic and cardiopulmonary function.
- Positive pressure ventilation may be necessary.
- Acute central nervous system signs and symptoms may result from large ingestions of aspiration-induced hypoxia.
- After the initial episode, individuals should be followed for changes in blood variables and the delayed appearance of pulmonary oedema and chemical pneumonitis. Such patients should be followed for several days or weeks for delayed effects, including bone marrow toxicity, hepatic and renal impairment. Individuals with chronic pulmonary disease will be more seriously impaired, and recovery from inhalation exposure may be complicated.
- Gastrointestinal symptoms are usually minor and pathological changes of the liver and kidneys are reported to be uncommon in acute intoxications.
- Chlorinated and non-chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

BP America Product Safety & Toxicology Department

- Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
- High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

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

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| 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

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| Fire Fighting | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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). <p>Combustion products include: carbon dioxide (CO₂) phosphorus oxides (PO_x) sulfur oxides (SO_x) other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes.</p> |

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

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|---------------------|--|
| Minor Spills | <p>Slippery when spilt.</p> <ul style="list-style-type: none"> Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. |
| Major Spills | <p>Slippery when spilt. Moderate hazard.</p> <ul style="list-style-type: none"> 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

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| Safe handling | <p>The conductivity of this material may make it a static accumulator. A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m. Whether a liquid is nonconductive or semi-conductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.</p> <ul style="list-style-type: none"> Containers, even those that have been emptied, may contain explosive vapours. Do NOT cut, drill, grind, weld or perform similar operations on or near containers. Electrostatic discharge may be generated during pumping - this may result in fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec). |
|----------------------|--|

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| | <ul style="list-style-type: none"> ▶ Avoid splash filling. ▶ 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. ▶ DO NOT allow clothing wet with material to stay in contact with skin |
| Other information | <ul style="list-style-type: none"> ▶ 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

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|--------------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks. |
| Storage incompatibility | <p>CARE: Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire.</p> <ul style="list-style-type: none"> ▶ 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 |
|---|---|---|---------------------|----------------------|---------------|--|
| Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances | paraffinic distillate, heavy, hydrotreated (severe) | Oil mist, mineral | 5 mg/m ³ | 10 mg/m ³ | Not Available | Not Available |
| Canada - Nova Scotia Occupational Exposure Limits | paraffinic distillate, heavy, hydrotreated (severe) | Oil mist - mineral | 5 mg/m ³ | 10 mg/m ³ | Not Available | TLV Basis: lung. As sampled by method that does not collect vapor. |
| Canada - Alberta Occupational Exposure Limits | paraffinic distillate, heavy, hydrotreated (severe) | Oil mist, mineral | 5 mg/m ³ | 10 mg/m ³ | Not Available | Not Available |
| Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits | paraffinic distillate, heavy, hydrotreated (severe) | Oil mist, mineral | 5 mg/m ³ | 10 mg/m ³ | Not Available | Not Available |
| Canada - Manitoba Occupational Exposure Limits | paraffinic distillate, heavy, hydrotreated (severe) | Not Available | 5 mg/m ³ | Not Available | Not Available | TLV® Basis: URT irr |
| Canada - British Columbia Occupational Exposure Limits | paraffinic distillate, heavy, hydrotreated (severe) | Oil mist - mineral, severely refined | 1 mg/m ³ | Not Available | Not Available | Not Available |
| Canada - Prince Edward Island Occupational Exposure Limits | paraffinic distillate, heavy, hydrotreated (severe) | Mineral oil, excluding metal working fluids - Pure, highly and severely refined | 5 mg/m ³ | Not Available | Not Available | TLV® Basis: URT irr |
| Canada - Northwest Territories Occupational Exposure Limits | paraffinic distillate, heavy, hydrotreated (severe) | Oil mist, mineral | 5 mg/m ³ | 10 mg/m ³ | Not Available | Not Available |
| Canada - Quebec Permissible Exposure Values for Airborne Contaminants | paraffinic distillate, heavy, hydrotreated (severe) | Mineral oil (mist) | 5 mg/m ³ | 10 mg/m ³ | Not Available | Not Available |

Emergency Limits

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|--|-----------------------|-------------------------|-------------------------|
| paraffinic distillate, heavy, hydrotreated (severe) | Mineral oil, heavy or light; (paraffin oil; Deobase, deodorized; heavy paraffinic; heavy naphthenic); distillates; includes 64741-53-3, 64741-88-4, 8042-47-5, 8012-95-1; 64742-54-7 | 140 mg/m ³ | 1,500 mg/m ³ | 8,900 mg/m ³ |


| Ingredient | Original IDLH | Revised IDLH |
|---|-------------------------|---------------|
| paraffinic distillate, heavy, hydrotreated (severe) | 2,500 mg/m ³ | Not Available |
| (C14-16-18)alkylphenol | Not Available | Not Available |
| nonylated diphenylamines | Not Available | Not Available |
| zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate | Not Available | Not Available |

Occupational Exposure Banding

| Ingredient | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|---|-----------------------------------|----------------------------------|
| (C14-16-18)alkylphenol | E | ≤ 0.01 mg/m ³ |
| zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate | E | ≤ 0.01 mg/m ³ |

Notes: Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

Exposure controls

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|---|---|
| Appropriate engineering 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. The basic types of engineering controls are: 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. |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ 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. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber <p>NOTE:</p> <ul style="list-style-type: none"> ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. <p>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 making a final choice. Personal hygiene is a key element of effective hand care.</p> |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C apron. ▶ Barrier cream. ▶ Skin cleansing cream. |

Respiratory protection

Type AK-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 | AK-AUS P2 | - | AK-PAPR-AUS / Class 1 P2 |
| up to 50 x ES | - | AK-AUS / Class 1 P2 | - |
| up to 100 x ES | - | AK-2 P2 | AK-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 | Brown liquid with characteristic odour; not miscible with water. | | |
| Physical state | Liquid | Relative density (Water = 1) | 0.845 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Applicable | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | -48 | Viscosity (cSt) | 49, 9.2 @ 100C |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | 230 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Applicable | Oxidising properties | Not Available |

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| | | | |
|---------------------------|---------------|----------------------------------|---------------|
| 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 | Immiscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

SECTION 10 Stability and reactivity

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|------------------------------------|--|
| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur. |
| Possibility of hazardous reactions | See section 7 |
| Conditions to avoid | See section 7 |
| Incompatible materials | See section 7 |
| Hazardous decomposition products | See section 5 |

SECTION 11 Toxicological information

Information on toxicological effects

| | |
|--------------|---|
| Inhaled | <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> <p>There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>Inhaling high concentrations of mixed hydrocarbons can cause narcosis, with nausea, vomiting and lightheadedness. Low molecular weight (C2-C12) hydrocarbons can irritate mucous membranes and cause incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and stupor.</p> <p>Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.</p> <p>Inhalation of oil droplets or aerosols may cause discomfort and may produce chemical inflammation of the lungs.</p> |
| Ingestion | Accidental ingestion of the material may be damaging to the health of the individual. |
| Skin Contact | <p>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>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.</p> |
| Eye | This material can cause eye irritation and damage in some persons. |
| Chronic | <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of the feet.</p> <p>Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin.</p> <p>Repeated application of mildly hydrotreated oils (principally paraffinic), to mouse skin, induced skin tumours; no tumours were induced with severely hydrotreated oils.</p> |

| | | |
|---|---|--|
| 20198, 20200, 20355, 22172 SPECIAL TEC V 0W-20 1L, 5L, 60L, 1000L | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| paraffinic distillate, heavy, hydrotreated (severe) | TOXICITY | IRRITATION |
| | <p>Oral (rat) LD50: >2000 mg/kg^[2]</p> <p>Oral (rat) LD50: >5000 mg/kg^[2]</p> | <p>Eye: no adverse effect observed (not irritating)^[1]</p> <p>Skin: no adverse effect observed (not irritating)^[1]</p> |
| (C14-16-18)alkylphenol | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| nonylated diphenylamines | TOXICITY | IRRITATION |
| | Not Available | <p>Eye: no adverse effect observed (not irritating)^[1]</p> <p>Skin: no adverse effect observed (not irritating)^[1]</p> |
| zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >5000 mg/kg ^[2] | Eye : Severe * |
| | Inhalation (rat) LC50: >50 mg/l ^[2] | Eye: adverse effect observed (irritating) ^[1] |
| | Oral (rat) LD50: >2000 mg/kg ^[2] | <p>Skin : Moderate *</p> <p>Skin: adverse effect observed (irritating)^[1]</p> |

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

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|--|---|
| PARAFFINIC DISTILLATE, HEAVY, HYDROTREATED (SEVERE) | <p>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:</p> <ul style="list-style-type: none"> 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. <p>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. In comparison to unrefined and mildly refined base oils, the highly and severely refined distillate base oils have a smaller range of hydrocarbon molecules and have demonstrated very low mammalian toxicity. Testing of residual oils for mutation-causing and cancer-causing potential has shown negative results, supporting the belief that these materials lack biologically active components or the components are largely non-bioavailable due to their molecular size.</p> <p>Toxicity testing has consistently shown that lubricating base oils have low acute toxicities.</p> <p>For highly and severely refined distillate base oils:</p> <p>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.</p> <p>The substance is classified by IARC as Group 3:</p> <p>NOT classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p> |
| (C14-16-18)ALKYLPHENOL | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. No significant acute toxicological data identified in literature search.</p> |
| NONYLATED DIPHENYLAMINES | <p>Heating of substituted diphenylamines may generate vapours which can irritate the eyes and airways. Drying of skin and mucous membranes leading to irritation may occur with prolonged or repeated contact. Overexposure may cause skin and airway irritation with dizziness and flu-like symptoms. All show a slight to very low order of toxicity following oral or topical administration.</p> |
| ZINC BIS[O-(6-METHYLHEPTYL & SEC-BUTYL)]DITHIOPHOSPHATE | <p>BB4 SDS (Infineum)</p> <p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>Dithiophosphate alkyl esters is corrosive and toxic to the tissues on skin or oral exposure depending on its concentration. Symptoms included diarrhoea, skin and gastrointestinal irritation, lethargy, reduced food intake, staining about the nose and eye; occasionally, there was drooping of the eyelid, hair standing up, inco-ordination and salivation. Toxicity is reduced following inhalation (due to vapour pressure and high viscosity). It may produce reproductive, developmental and genetic toxicity on experimental animals, but no substantive data is available to establish effect on humans.</p> |

| | | | |
|--|---|---------------------------------|---|
| 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

| 20198, 20200, 20355, 22172 SPECIAL TEC V 0W-20 1L, 5L, 60L, 1000L | Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---------------|--------------------|-------------------------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| paraffinic distillate, heavy, hydrotreated (severe) | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96 | Fish | >100mg/L | 2 |
| | EC50 | 48 | Crustacea | >10-mg/L | 2 |
| | EC50 | 96 | Algae or other aquatic plants | >1000mg/L | 1 |
| | NOEC | 504 | Crustacea | >1mg/L | 1 |
| (C14-16-18)alkylphenol | Endpoint | Test Duration (hr) | Species | Value | Source |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| nonylated diphenylamines | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96 | Fish | >100mg/L | 2 |
| | EC50 | 48 | Crustacea | 51mg/L | 2 |
| | EC50 | 72 | Algae or other aquatic plants | >100mg/L | 2 |
| | EC0 | 24 | Crustacea | 22mg/L | 2 |

Continued...

| | | | | | |
|--|----------|--------------------|-------------------------------|---------|--------|
| | NOEC | 96 | Crustacea | <10mg/L | 1 |
| zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96 | Fish | 4.5mg/L | 2 |
| | EC50 | 48 | Crustacea | 5.4mg/L | 2 |
| | EC50 | 72 | Algae or other aquatic plants | 2mg/L | 2 |
| | NOEC | 504 | Crustacea | 0.4mg/L | 2 |
| Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data | | | | | |

Harmful to aquatic organisms, 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 |
|---|-------------------------|------------------|
| zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate | HIGH | HIGH |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|------------------------|
| zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate | HIGH (LogKOW = 6.0235) |

Mobility in soil

| Ingredient | Mobility |
|---|------------------|
| zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate | LOW (KOC = 3509) |

SECTION 13 Disposal considerations

Waste treatment methods

| | |
|------------------------------|---|
| Product / Packaging disposal | <ul style="list-style-type: none"> ▶ 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. |
|------------------------------|---|

SECTION 14 Transport information

Labels Required

| | |
|------------------|----|
| Marine Pollutant | NO |
|------------------|----|

Land transport (TDG): 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

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

paraffinic distillate, heavy, hydrotreated (severe) is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

(C14-16-18)alkylphenol is found on the following regulatory lists

Not Applicable

nonylated diphenylamines is found on the following regulatory lists

Canada Categorization decisions for all DSL substances

Canada Domestic Substances List (DSL)

zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate is found on the following regulatory lists

Canada Categorization decisions for all DSL substances

Canada Domestic Substances List (DSL)

National Inventory Status

| National Inventory | Status |
|--------------------------------|--|
| Australia - AIC | No ((C14-16-18)alkylphenol) |
| Australia - Non-Industrial Use | No (paraffinic distillate, heavy, hydrotreated (severe); (C14-16-18)alkylphenol; nonylated diphenylamines; zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate) |
| Canada - DSL | No ((C14-16-18)alkylphenol) |
| Canada - NDSL | No (paraffinic distillate, heavy, hydrotreated (severe); (C14-16-18)alkylphenol; nonylated diphenylamines; zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate) |
| China - IECSC | No ((C14-16-18)alkylphenol) |
| Europe - EINEC / ELINCS / NLP | No ((C14-16-18)alkylphenol) |
| Japan - ENCS | Yes |
| Korea - KECI | No ((C14-16-18)alkylphenol) |
| New Zealand - NZIoC | No ((C14-16-18)alkylphenol) |
| Philippines - PICCS | No ((C14-16-18)alkylphenol) |
| USA - TSCA | No ((C14-16-18)alkylphenol) |
| Taiwan - TCSI | No ((C14-16-18)alkylphenol) |
| Mexico - INSQ | No ((C14-16-18)alkylphenol; nonylated diphenylamines; zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate) |
| Vietnam - NCI | No ((C14-16-18)alkylphenol) |
| Russia - ARIPS | No ((C14-16-18)alkylphenol; zinc bis[O-(6-methylheptyl & sec-butyl)]dithiophosphate) |
| 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 | 03/09/2020 |
| Initial Date | 20/07/2020 |

SDS Version Summary

| Version | Issue Date | Sections Updated |
|---------|------------|---|
| 3.1.1.1 | 03/09/2020 | Classification change due to full database hazard calculation/update. |

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
 PC—STEL: 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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