# SAFETY DATA SHEET

Molylube 5% Moly Extreme Pressure Grease AC 150-0

## Section 1. Identification

**GHS product identifier** : Molylube 5% Moly Extreme Pressure Grease AC 150-0

**Product code** : 301753150526

**Other means of identification** : Not available.

**Product type** : Liquid.

**Relevant identified uses of the substance or mixture and uses advised against**

| Identified uses |
|---|
| Lubricating agent grease |

| Uses advised against | Reason |
|---|---|
| None known. | |

**Supplier's details** : Calumet Branded Products, LLC
1060 N Capitol Ave Suite 6-401
Indianapolis, IN 46204
USA
Technical Services:317-328-5660

**Emergency telephone number** : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : SKIN SENSITIZATION - Category 1

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : May cause an allergic skin reaction.

**Precautionary statements**

**Prevention** : Wear protective gloves. Avoid breathing vapor. Contaminated work clothing must not be allowed out of the workplace.

**Response** : Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.

**Storage** : Not applicable.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified** : None known.

# Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : Not available.

| Ingredient name | % | CAS number |
|---|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | ≥50 - ≤75 | 64742-52-5 |
| Distillates (petroleum), hydrotreated heavy paraffinic | ≥25 - ≤41 | 64742-54-7 |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | ≥10 - ≤22 | 64742-65-0 |
| Distillates (petroleum), solvent-refined heavy naphthenic A complex combination of hydrocarbons obtained as the raffinate from a solvent extraction process. It consists of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity of at least 100 SUS at 100 °F (19cSt a 40 °C). It contains relatively few normal paraffins. | ≤10 | 64741-96-4 |
| molybdenum disulphide | ≤10 | 1317-33-5 |
| Aluminum, benzoate iso-Pr alc. stearate complexes | ≤5 | 68815-27-0 |
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | <2.5 | 72676-55-2 |
| White mineral oil (petroleum) | ≤3 | 8042-47-5 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

# Section 4. First aid measures

## Description of necessary first aid measures

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

# Section 4. First aid measures

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
irritation
redness

**Ingestion** : No specific data.

## Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**See toxicological information (Section 11)**

# Section 5. Fire-fighting measures

## Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# Section 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

# Section 6. Accidental release measures

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

## Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

# Section 7. Handling and storage

## Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

## Control parameters

### Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | **ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined]**<br>TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction<br>**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**<br>TWA: 5 mg/m³ 8 hours.<br>**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]** |

# Section 8. Exposure controls/personal protection

| | |
|---|---|
| | TWA: 5 mg/m³ 10 hours. Form: Mist<br>STEL: 10 mg/m³ 15 minutes. Form: Mist |
| Distillates (petroleum), hydrotreated heavy paraffinic | **ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined]**<br>TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction<br>**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**<br>TWA: 5 mg/m³ 8 hours.<br>**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]**<br>TWA: 5 mg/m³ 10 hours. Form: Mist<br>STEL: 10 mg/m³ 15 minutes. Form: Mist |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | **ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined]**<br>TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction<br>**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**<br>TWA: 5 mg/m³ 8 hours.<br>**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]**<br>TWA: 5 mg/m³ 10 hours. Form: Mist<br>STEL: 10 mg/m³ 15 minutes. Form: Mist |
| Distillates (petroleum), solvent-refined heavy naphthenic A complex combination of hydrocarbons obtained as the raffinate from a solvent extraction process. It consists of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity of at least 100 SUS at 100 °F (19cSt a 40 °C). It contains relatively few normal paraffins. | **ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined]**<br>TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction<br>**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**<br>TWA: 5 mg/m³ 8 hours.<br>**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]**<br>TWA: 5 mg/m³ 10 hours. Form: Mist<br>STEL: 10 mg/m³ 15 minutes. Form: Mist |
| molybdenum disulphide | **ACGIH TLV (United States, 1/2023). [Molybdenum, Metal and insoluble compounds Inhalable fraction / Respirable fraction, as Mo]**<br>TWA: 10 mg/m³, (as Mo) 8 hours. Form: Inhalable fraction<br>TWA: 3 mg/m³, (as Mo) 8 hours. Form: Respirable fraction<br>**OSHA PEL 1989 (United States, 3/1989). [Molybdenum (as Mo) insoluble compounds]**<br>TWA: 10 mg/m³, (as Mo) 8 hours. Form: Total dust<br>**OSHA PEL (United States, 5/2018). [Molybdenum Insoluble Compounds (as Mo)]**<br>TWA: 15 mg/m³, (as Mo) 8 hours. Form: Total dust<br>**CAL OSHA PEL (United States, 5/2018). [molybdenum, insoluble compounds as MO]**<br>TWA: 3 mg/m³, (as Mo) 8 hours. Form: |

# Section 8. Exposure controls/personal protection

| | |
|---|---|
| | respirable fraction<br>TWA: 10 mg/m³, (as Mo) 8 hours. Form: total dust |
| Aluminum, benzoate iso-Pr alc. stearate complexes | **NIOSH REL (United States, 10/2020). [aluminum soluble salts and alkyls as Al]**<br>TWA: 2 mg/m³, (as Al) 10 hours.<br>**ACGIH TLV (United States, 1/2023). [Stearates]**<br>TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction<br>**ACGIH TLV (United States, 1/2023). [Aluminum, metal and insoluble compounds]**<br>TWA: 1 mg/m³ 8 hours. Form: Respirable fraction<br>**CAL OSHA PEL (United States, 5/2018). [stearates]**<br>TWA: 10 mg/m³ 8 hours. |
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | None. |
| White mineral oil (petroleum) | **ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined]**<br>TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction<br>**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**<br>TWA: 5 mg/m³ 8 hours.<br>**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]**<br>TWA: 5 mg/m³ 10 hours. Form: Mist<br>STEL: 10 mg/m³ 15 minutes. Form: Mist |

**Biological exposure indices**

No exposure indices known.

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

# Section 8. Exposure controls/personal protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

# Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

**Physical state** : Liquid. [Viscous liquid.]

**Color** : Gray. [Dark]

**Odor** : Hydrocarbon.

**Odor threshold** : Not available.

**pH** : Not available.

**Melting point/freezing point** : Not available.

**Boiling point, initial boiling point, and boiling range** : Not available.

**Flash point** :

| | Closed cup | | | Open cup | | |
|---|---|---|---|---|---|---|
| **Ingredient name** | **°C** | **°F** | **Method** | **°C** | **°F** | **Method** |
| toluene | 4.4 | 39.9 | | | | |
| Distillates (petroleum), hydrotreated heavy naphthenic | | | | 98 to 344 | 208.4 to 651.2 | EN ISO 2719 |
| Distillates (petroleum), hydrotreated heavy paraffinic | | | | 98 to 344 | 208.4 to 651.2 | EN ISO 2719 |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | | | | 98 to 344 | 208.4 to 651.2 | EN ISO 2719 |
| Distillates (petroleum), solvent-refined heavy naphthenic A complex combination of hydrocarbons obtained as the raffinate from a solvent extraction process. It consists of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity of at least 100 SUS at 100 °F (19cSt a 40 °C). It contains relatively few normal paraffins. | | | | 98 to 344 | 208.4 to 651.2 | EN ISO 2719 |

# Section 9. Physical and chemical properties and safety characteristics

| | | | | | | |
|---|---|---|---|---|---|---|
| White mineral oil (petroleum) | >112 | >233.6 | ISO 2719 | | | |
| Distillates (petroleum), solvent-refined heavy paraffinic | >124 | >255.2 | | 98 to 344 | 208.4 to 651.2 | |
| 1-Propene, 2-methyl-, homopolymer | | | | 175 | 347 | Cleveland |
| Sulfonic acids, petroleum, sodium salts | | | | >160 | >320 | |
| Ethene, homopolymer | 341 | 645.8 | | | | |

**Evaporation rate** : Not available.

**Flammability** : Not available.

**Lower and upper explosion limit/flammability limit** : Not available.

**Vapor pressure** :

| Ingredient name | Vapor Pressure at 20˚C | | | Vapor pressure at 50˚C | | |
|---|---|---|---|---|---|---|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| White mineral oil (petroleum) | 0.07501 | 0.01 | OECD 104 | | | |

**Relative vapor density** : Not available.

**Relative density** : 0.8951

**Solubility(ies)** : Not available.

**Solubility in water** : Not available.

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** :

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| White mineral oil (petroleum) | 325 to 355 | 617 to 671 | ASTM E 659 |

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

**Flow time (ISO 2431)** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

# Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : No specific data.

**Incompatible materials** : No specific data.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# Section 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | LC50 Inhalation Dusts and mists | Rat | 5.7 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| Distillates (petroleum), hydrotreated heavy paraffinic | LC50 Inhalation Dusts and mists | Rat | 5.7 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | LC50 Inhalation Dusts and mists | Rat | >5.53 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| Distillates (petroleum), solvent-refined heavy naphthenic A complex combination of hydrocarbons obtained as the raffinate from a solvent extraction process. It consists of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity of at least 100 SUS at 100 °F (19cSt a 40 °C). It contains relatively few normal paraffins. | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| molybdenum disulphide | LC50 Inhalation Vapor | Rat | >5.1 mg/l | 4 hours |
| | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | 5000 mg/kg | - |
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >2000 mg/kg | - |
| White mineral oil (petroleum) | LC50 Inhalation Dusts and mists | Rat | >5 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |

### Irritation/Corrosion

Not available.

### Sensitization

| Product/ingredient name | Route of exposure | Species | Result |
|---|---|---|---|
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | skin | Mouse | Sensitizing |

### Mutagenicity

# Section 11. Toxicological information

| Product/ingredient name | Test | Experiment | Result |
|---|---|---|---|
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | OECD 476 *In vitro* Mammalian Cell Gene Mutation Test | Experiment: In vitro<br>Subject: Mammalian-Animal | Positive |
| | OECD 471 Bacterial Reverse Mutation Test | Experiment: In vitro<br>Subject: Bacteria | Negative |
| | OECD 487 *In vitro* Micronucleus Test | Experiment: In vitro<br>Subject: Mammalian-Animal | Negative |

## Carcinogenicity

Not available.

## Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Development toxin | Species | Dose | Exposure |
|---|---|---|---|---|---|---|
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | - | - | - | Rat | Oral: 300 mg/kg | 47 days |

## Teratogenicity

Not available.

## Specific target organ toxicity (single exposure)

Not available.

## Specific target organ toxicity (repeated exposure)

Not available.

## Aspiration hazard

| Name | Result |
|---|---|
| White mineral oil (petroleum) | ASPIRATION HAZARD - Category 1 |

**Information on the likely routes of exposure** : Not available.

## Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

## Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
irritation
redness

**Ingestion** : No specific data.

## Delayed and immediate effects and also chronic effects from short and long term exposure

### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

# Section 11. Toxicological information

**Potential delayed effects** : Not available.

**Potential chronic health effects**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | Sub-acute NOAEL Oral | Rat | 1000 mg/kg | 14 days |

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| Molylube 5% Moly Extreme Pressure Grease AC 150-0 | 120143.1 | 3015.8 | N/A | N/A | N/A |
| Distillates (petroleum), hydrotreated heavy naphthenic | N/A | 2500 | N/A | N/A | 5.7 |
| Distillates (petroleum), hydrotreated heavy paraffinic | N/A | 2500 | N/A | N/A | 5.7 |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | N/A | 2500 | N/A | N/A | N/A |
| molybdenum disulphide | 5000 | 2500 | N/A | N/A | N/A |
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | 2500 | 2500 | N/A | N/A | N/A |
| White mineral oil (petroleum) | N/A | 2500 | N/A | N/A | N/A |

# Section 12. Ecological information

**Toxicity**

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | Acute EC50 >100 mg/l | Algae | 72 hours |
| | Acute EC50 >100 mg/l | Crustaceans | 48 hours |
| | Acute LC50 >100 mg/l | Fish | 96 hours |
| Distillates (petroleum), hydrotreated heavy paraffinic | Acute EC50 >100 mg/l | Daphnia | 48 hours |
| | Acute IC50 >100 mg/l | Algae | 72 hours |
| | Acute LC50 >100 mg/l | Fish | 96 hours |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | Acute EC50 >100 mg/l | Algae | 72 hours |
| | Acute EC50 >100 mg/l | Daphnia | 48 hours |
| | Acute LC50 >100 mg/l | Fish | 96 hours |
| | Chronic NOEL >1 mg/l | Daphnia | 21 days |
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | Acute EC10 9.4 mg/l | Algae | 72 hours |
| | Acute EC50 20 mg/l | Algae | 72 hours |
| | Acute EC50 3 mg/l | Daphnia | 48 hours |
| | Acute EC50 >454 mg/l | Fish | 96 hours |
| White mineral oil (petroleum) | Acute LC50 >100 mg/l | Daphnia | 48 hours |
| | Acute LC50 >10000 mg/l | Fish | 96 hours |

# Section 12. Ecological information

## Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|---|---|---|---|
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | OECD 301B Ready Biodegradability - $CO_2$ Evolution Test | 0 % - Not readily - 28 days | - | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | - | - | Inherent |
| Distillates (petroleum), hydrotreated heavy paraffinic | - | - | Not readily |
| 5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione | - | - | Not readily |
| White mineral oil (petroleum) | - | - | Inherent |

## Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| Distillates (petroleum), hydrotreated heavy paraffinic | >6 | - | High |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | 2 to 6 | - | High |
| White mineral oil (petroleum) | >6 | - | High |

## Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

# Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# Section 14. Transport information

| | DOT Classification | TDG Classification | IMDG | IATA |
|---|---|---|---|---|
| UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

# Section 14. Transport information

**Transport in bulk according to IMO instruments** : Not available.

# Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

**Clean Water Act (CWA) 307**: toluene

**Clean Water Act (CWA) 311**: toluene

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

## SARA 302/304

### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

## SARA 311/312

**Classification** : SKIN SENSITIZATION - Category 1

### Composition/information on ingredients

| Name | % | Classification |
|---|---|---|
| 5,5'-dithiodi-1,3,4-thiadiazole-2 (3H)-thione | <2.5 | SKIN SENSITIZATION - Category 1 |
| White mineral oil (petroleum) | ≤3 | ASPIRATION HAZARD - Category 1 |

## State regulations

**Massachusetts** : The following components are listed: OIL MIST, MINERAL; OIL MIST, MINERAL; OIL MIST, MINERAL; MOLYBDENUM DISULFIDE; OIL MIST, MINERAL

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

## California Prop. 65

⚠ **WARNING**: This product can expose you to Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.
Information provided is based on industrial use and may not be relevant to consumer applications.

| Ingredient name | Concentration (% ) | No significant risk level | Maximum acceptable dosage level |
|---|---|---|---|
| Toluene | 0.00072422 | - | Yes. |

## International lists

### National inventory

**Australia** : All components are listed or exempted.

**Canada** : All components are listed or exempted.

**China** : All components are listed or exempted.

# Section 15. Regulatory information

**Eurasian Economic Union** : **Russian Federation inventory**: All components are listed or exempted.

**New Zealand** : All components are listed or exempted.

**Philippines** : All components are listed or exempted.

**Republic of Korea** : All components are listed or exempted.

**Taiwan** : All components are listed or exempted.

**Thailand** : At least one component is not listed.

**Turkey** : Not determined.

**United States** : All components are active or exempted.

**Viet Nam** : All components are listed or exempted.

# Section 16. Other information

## National Fire Protection Association (U.S.A.)




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**Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.**

## Procedure used to derive the classification

| Classification | Justification |
|---|---|
| SKIN SENSITIZATION - Category 1 | Calculation method |

## History

**Date of issue/Date of revision** : 09/10/2024

**Date of previous issue** : 08/14/2023

**Version** : 4.01

**Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

**Indicates information that has changed from previously issued version.**

## Notice to reader

# Section 16. Other information

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**
**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**