SAFETY DATA SHEET

Molylube Low Temperature Multipurpose Grease 1

Section 1. Identification

GHS product identifier : Molylube Low Temperature Multipurpose Grease 1

Product code : 301042150004

Other means of identification : Not available.

Product type : Liquid.

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

Identified uses
grease Lubricating agent

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
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 10%

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear protective gloves. Avoid release to the environment. 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 light naphthenic	≥50 - ≤63	64742-53-6
Distillates (petroleum), hydrotreated heavy paraffinic	≥50 - ≤63	64742-54-7
Distillates (petroleum), solvent-dewaxed heavy paraffinic	≥50 - ≤63	64742-65-0
Fatty acids, tallow, hydrogenated, reaction products with aluminum isopropoxide and benzoic acid	≥10 - ≤25	68201-44-5
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	≤3	72676-55-2
Natural graphite	≤3	7782-42-5
molybdenum disulphide	≤3	1317-33-5
Distillates (petroleum), solvent-refined heavy paraffinic	≤1.2	64741-88-4
Lubricating oils (petroleum), hydrotreated spent	≤3	64742-58-1
Sulfonic acids, petroleum, sodium salts	≤1.2	68608-26-4

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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

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.

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). Water polluting material. May be harmful to the environment if released in large quantities.

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. Avoid release to the environment. 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 light naphthenic	**ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined]** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 5/2018). [Oil mist, mineral]** TWA: 5 mg/m³ 8 hours. **NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]** TWA: 5 mg/m³ 10 hours. Form: Mist 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]** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 5/2018). [Oil mist, mineral]** TWA: 5 mg/m³ 8 hours. **NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]** TWA: 5 mg/m³ 10 hours. Form: Mist 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]** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 5/2018). [Oil mist, mineral]** TWA: 5 mg/m³ 8 hours. **NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist
Fatty acids, tallow, hydrogenated, reaction products with aluminum isopropoxide and benzoic acid	**OSHA PEL 1989 (United States, 3/1989). [Aluminum (as Al) Metal, Soluble salts]** TWA: 2 mg/m³, (as Al) 8 hours. **NIOSH REL (United States, 10/2020). [aluminum soluble salts and alkyls as Al]** TWA: 2 mg/m³, (as Al) 10 hours. **CAL OSHA PEL (United States, 5/2018). [aluminum soluble salts]** TWA: 2 mg/m³ 8 hours.
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	None.
Natural graphite	**OSHA PEL Z3 (United States, 6/2016).** TWA: 15 mppcf 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 2.5 mg/m³ 8 hours. Form: Respirable dust **ACGIH TLV (United States, 1/2023).** TWA: 2 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2020).** TWA: 2.5 mg/m³ 10 hours. Form: Respirable fraction

Section 8. Exposure controls/personal protection

	OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **CAL OSHA PEL (United States, 5/2018).** TWA: 2.5 mg/m³ 8 hours. Form: respirable dust
molybdenum disulphide	**ACGIH TLV (United States, 1/2023). [Molybdenum, Metal and insoluble compounds Inhalable fraction / Respirable fraction, as Mo]** TWA: 10 mg/m³, (as Mo) 8 hours. Form: Inhalable fraction TWA: 3 mg/m³, (as Mo) 8 hours. Form: Respirable fraction **OSHA PEL 1989 (United States, 3/1989). [Molybdenum (as Mo) insoluble compounds]** TWA: 10 mg/m³, (as Mo) 8 hours. Form: Total dust **OSHA PEL (United States, 5/2018). [Molybdenum Insoluble Compounds (as Mo)]** TWA: 15 mg/m³, (as Mo) 8 hours. Form: Total dust **CAL OSHA PEL (United States, 5/2018). [molybdenum, insoluble compounds as MO]** TWA: 3 mg/m³, (as Mo) 8 hours. Form: respirable fraction TWA: 10 mg/m³, (as Mo) 8 hours. Form: total dust
Distillates (petroleum), solvent-refined heavy paraffinic	**ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined]** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 5/2018). [Oil mist, mineral]** TWA: 5 mg/m³ 8 hours. **NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist
Lubricating oils (petroleum), hydrotreated spent	**ACGIH TLV (United States).** TWA: 5 mg/m³, (Inhalable Mist) 8 hours.
Sulfonic acids, petroleum, sodium salts	None.

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

Section 8. Exposure controls/personal protection

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

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. [Semi-solid]

Color : Gray. [Dark]

Odor : Not available.

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 : Open cup: >150°C (>302°F) [Cleveland]

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
Distillates (petroleum), hydrotreated heavy paraffinic	<0.07501	<0.01	ASTM D 5191			

Relative vapor density : Not available.

Relative density : Not available.

Section 9. Physical and chemical properties and safety characteristics

Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Solubility in water : Not available.

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

Auto-ignition temperature : 260°C (500°F)

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): Not applicable.

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 light 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	-
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
Natural graphite	LC50 Inhalation Vapor	Rat	>2000 mg/m³	4 hours
	LD50 Oral	Rat	>2000 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	-
Distillates (petroleum), solvent-refined heavy	LC50 Inhalation Dusts and mists	Rat - Male, Female	2.18 mg/l	4 hours

Section 11. Toxicological information

paraffinic				
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Lubricating oils (petroleum), hydrotreated spent	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Sulfonic acids, petroleum, sodium salts	LC50 Inhalation Vapor	Rat	1.9 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Sulfonic acids, petroleum, sodium salts	Eyes - Irritant	Rabbit	-	-	-

Sensitization

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

Mutagenicity

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 Subject: Mammalian-Animal	Positive
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 487 *In vitro* Micronucleus Test	Experiment: In vitro 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
Distillates (petroleum), hydrotreated light naphthenic	ASPIRATION HAZARD - Category 1
Distillates (petroleum), solvent-refined heavy paraffinic	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.

Section 11. Toxicological information

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.

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 Low Temperature Multipurpose Grease 1	170600	2558.3	N/A	N/A	344.7
Distillates (petroleum), hydrotreated light 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
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	2500	2500	N/A	N/A	N/A
Natural graphite	2500	N/A	N/A	N/A	N/A
molybdenum disulphide	5000	2500	N/A	N/A	N/A
Distillates (petroleum), solvent-refined heavy paraffinic	N/A	2500	N/A	N/A	2.18
Sulfonic acids, petroleum, sodium salts	N/A	2500	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Distillates (petroleum), hydrotreated light 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
Natural graphite	Acute LC50 >100 mg/l	Fish	96 hours
	Acute NOEC >100 mg/l	Fish	96 hours
Distillates (petroleum), solvent-refined 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
Sulfonic acids, petroleum, sodium salts	EC50 1000 mg/l	Algae	4 days

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 light naphthenic	-	-	Inherent
Distillates (petroleum), hydrotreated heavy paraffinic	-	-	Not readily
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	-	-	Not readily
Distillates (petroleum), solvent-refined heavy paraffinic	-	-	Inherent

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Distillates (petroleum), hydrotreated light naphthenic	>6	-	High
Distillates (petroleum), hydrotreated heavy paraffinic	>6	-	High
Distillates (petroleum), solvent-dewaxed heavy paraffinic	2 to 6	-	High
Distillates (petroleum), solvent-refined heavy paraffinic	3.9 to 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.

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 Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

Section 15. Regulatory information

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
Distillates (petroleum), hydrotreated light naphthenic	≥50 - ≤63	ASPIRATION HAZARD - Category 1
5,5'-dithiodi-1,3,4-thiadiazole-2 (3H)-thione	≤3	SKIN SENSITIZATION - Category 1
Distillates (petroleum), solvent-refined heavy paraffinic	≤1.2	ACUTE TOXICITY (inhalation) - Category 4 ASPIRATION HAZARD - Category 1
Sulfonic acids, petroleum, sodium salts	≤1.2	EYE IRRITATION - Category 2A

State regulations

Massachusetts : The following components are listed: GRAPHITE (NATURAL)DUST; MOLYBDENUM DISULFIDE; OIL MIST, MINERAL

New York : None of the components are listed.

New Jersey : The following components are listed: GRAPHITE (NATURAL); SILICA, QUARTZ

Pennsylvania : The following components are listed: GRAPHITE

California Prop. 65

This product is not known to contain California Prop 65 substances ≥1 ppm

International lists

National inventory

Australia : All components are listed or exempted.

Canada : At least one component is not listed in DSL but all such components are listed in NDSL.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

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 : Not determined.

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.)



Section 16. Other information

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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
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

History

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

Date of previous issue : 10/20/2023

Version : 5

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

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