SAFETY DATA SHEET

Ultra-Performance Grease 1

Section 1. Identification

GHS product identifier : Ultra-Performance Grease 1

Product code : 301007175235

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
TOXIC TO REPRODUCTION - Category 2
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment. Avoid breathing vapor. Contaminated work clothing must not be allowed out of the workplace.

Response : IF exposed or concerned: Get medical advice or attention. 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 : Store locked up.

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

Section 2. Hazards identification

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), solvent-dewaxed heavy paraffinic	≥25 - ≤50	64742-65-0
Distillates (petroleum), hydrotreated heavy paraffinic	≥10 - ≤25	64742-54-7
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 - ≤25	64741-96-4
Distillates (petroleum), hydrotreated heavy paraffinic	≤10	64742-54-7
Aluminum, benzoate iso-Pr alc. stearate complexes	≤10	68815-27-0
White mineral oil (petroleum)	≤5	8042-47-5
Distillates (petroleum), hydrotreated heavy naphthenic	≤2.1	64742-52-5
zinc bis(dipentyldithiocarbamate)	≤3	15337-18-5
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	<1	68411-46-1
2,5-bis(octyldithio)-1,3,4-thiadiazole	<1	13539-13-4
Amines, C12-14-tert-alkyl	≤0.3	68955-53-3
(Z)-octadec-9-enylamine	≤0.1	112-90-3

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346

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 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.

Section 4. First aid measures

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. 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.

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 : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

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.

Section 5. Fire-fighting measures

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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain

Section 7. Handling and storage

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. Store locked up. 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), 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
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-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]** 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

Section 8. Exposure controls/personal protection

	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
Aluminum, benzoate iso-Pr alc. stearate complexes	**NIOSH REL (United States, 10/2020). [aluminum soluble salts and alkyls as Al]** TWA: 2 mg/m³, (as Al) 10 hours. **ACGIH TLV (United States, 1/2023). [Stearates]** TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction **ACGIH TLV (United States, 1/2023). [Aluminum, metal and insoluble compounds]** TWA: 1 mg/m³ 8 hours. Form: Respirable fraction **CAL OSHA PEL (United States, 5/2018). [stearates]** TWA: 10 mg/m³ 8 hours.
White mineral oil (petroleum)	**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 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
zinc bis(dipentyldithiocarbamate)	None.
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	None.
2,5-bis(octyldithio)-1,3,4-thiadiazole	None.
Amines, C12-14-tert-alkyl	None.
(Z)-octadec-9-enylamine	None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Section 8. Exposure controls/personal protection

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

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 mass.]

Color : Purple. [Dark]

Odor : Hydrocarbon.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point, initial boiling point, and boiling range : 360°C (680°F)

Flash point : Closed cup: >221°C (>429.8°F) [Pensky-Martens]

Evaporation rate : Not available.

Flammability : Not available.

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

Vapor pressure :

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Amines, C12-14-tert-alkyl	0.17	0.023	EU A.4			

Relative vapor density : Not available.

Relative density : 0.91

Solubility(ies) : Not available.

Solubility in water : Not available.

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

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

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), 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), 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-refined heavy naphthenic A complex combination of hydrocarbons obtained as the raffinate from a solvent extraction process. It consists of hydrocarbons having carbon numbers	LD50 Dermal	Rabbit	>5000 mg/kg	-

Section 11. Toxicological information

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 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	-
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	-
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	-
zinc bis (dipentyldithiocarbamate)	LD50 Dermal	Rabbit	>16000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Amines, C12-14-tert-alkyl	LC50 Inhalation Vapor	Rat	1.19 mg/l	4 hours
	LD50 Dermal	Rabbit	1120 mg/kg	-
	LD50 Dermal	Rat	251 mg/kg	-
	LD50 Oral	Rat	300 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Amines, C12-14-tert-alkyl	Eyes - Severe irritant Skin - Severe irritant	Rabbit Rabbit	- -	0.1 Ml 0.5 Ml	- -

Sensitization

Product/ingredient name	Route of exposure	Species	Result
zinc bis (dipentyldithiocarbamate)	skin	Mouse	Not sensitizing
Amines, C12-14-tert-alkyl	skin	Guinea pig	Sensitizing
(Z)-octadec-9-enylamine	skin	Guinea pig	Not sensitizing

Mutagenicity

Product/ingredient name	Test	Experiment	Result
zinc bis (dipentyldithiocarbamate)	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 487 *In vitro* Micronucleus Test	Experiment: In vitro Subject: Mammalian-Human	Negative
Amines, C12-14-tert-alkyl	476 *In vitro* Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
(Z)-octadec-9-enylamine	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	476 *In vitro* Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative

Carcinogenicity

Not available.

Reproductive toxicity

Section 11. Toxicological information

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Zinc bis (dipentyldithiocarbamate)	Equivocal	Equivocal	Equivocal	Rat	Oral: 250 mg/kg	-
Amines, C12-14-tert-alkyl	Positive	Negative	Negative	Rat	Oral	-
(Z)-octadec-9-enylamine	Positive	Negative	Negative	Rat	Oral	-

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Amines, C12-14-tert-alkyl	Negative - Dermal	Rat	-	-
(Z)-octadec-9-enylamine	Negative - Oral	Rat	-	-

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Amines, C12-14-tert-alkyl	Category 3	-	Respiratory tract irritation
(Z)-octadec-9-enylamine	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
(Z)-octadec-9-enylamine	Category 2	-	gastrointestinal tract, immune system, liver

Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated heavy paraffinic	ASPIRATION HAZARD - Category 1
White mineral oil (petroleum)	ASPIRATION HAZARD - Category 1
(Z)-octadec-9-enylamine	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 : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

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
Amines, C12-14-tert-alkyl	Sub-acute NOAEL Dermal Sub-acute NOAEL Inhalation Vapor	Rat Rat	20 mg/kg 19 mg/m³	- 4 weeks

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 : Suspected of damaging fertility or the unborn child.

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)
Ultra-Performance Grease 1	217039.3	3512.7	N/A	N/A	N/A
Distillates (petroleum), solvent-dewaxed heavy paraffinic	N/A	2500	N/A	N/A	N/A
Distillates (petroleum), hydrotreated heavy paraffinic	N/A	2500	N/A	N/A	5.7
Distillates (petroleum), hydrotreated heavy paraffinic	N/A	2500	N/A	N/A	5.7
White mineral oil (petroleum)	N/A	2500	N/A	N/A	N/A
Distillates (petroleum), hydrotreated heavy naphthenic	N/A	2500	N/A	N/A	5.7
zinc bis(dipentyldithiocarbamate)	2500	N/A	N/A	N/A	N/A
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	N/A	2500	N/A	N/A	N/A
2,5-bis(octyldithio)-1,3,4-thiadiazole	N/A	N/A	N/A	11	N/A
Amines, C12-14-tert-alkyl	500	251	N/A	1.19	N/A
(Z)-octadec-9-enylamine	500	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
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
Distillates (petroleum), hydrotreated heavy paraffinic	Acute EC50 >100 mg/l	Algae	72 hours

Section 12. Ecological information

	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
	Chronic NOEL >1 mg/l	Daphnia	21 days
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
White mineral oil (petroleum)	Acute LC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >10000 mg/l	Fish	96 hours
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
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Acute EC50 >100 mg/l	Algae	72 hours
	Acute EC50 51 mg/l	Daphnia	48 hours
	Acute LC50 >71 mg/l	Fish	96 hours
Amines, C12-14-tert-alkyl	Chronic NOEC 0.078 mg/l	Fish	96 days
(Z)-octadec-9-enylamine	EC50 >0.1 mg/l	Algae	3 days
	EC50 0.011 mg/l	Daphnia	2 days
	LC50 0.11 mg/l	Fish	4 days
	NOEC 0.013 mg/l	Daphnia	21 days

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
zinc bis (dipentyldithiocarbamate)	OECD 301B Ready Biodegradability - CO_2 Evolution Test	21 % - Not readily - 28 days	-	-
Amines, C12-14-tert-alkyl	OECD 301D Ready Biodegradability - Closed Bottle Test	21.8 % - Not readily - 28 days	-	-
(Z)-octadec-9-enylamine	-	66 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ultra-Performance Grease 1	-	-	Not readily
Distillates (petroleum), hydrotreated heavy paraffinic	-	-	Inherent
Distillates (petroleum), hydrotreated heavy paraffinic	-	-	Not readily
White mineral oil (petroleum)	-	-	Inherent
Distillates (petroleum), hydrotreated heavy naphthenic	-	-	Inherent
zinc bis (dipentyldithiocarbamate)	-	-	Not readily
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	-	-	Not readily
Amines, C12-14-tert-alkyl	-	-	Not readily
(Z)-octadec-9-enylamine	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Distillates (petroleum), solvent-dewaxed heavy paraffinic	2 to 6	-	High
Distillates (petroleum), hydrotreated heavy paraffinic	>6	-	High
Distillates (petroleum), hydrotreated heavy paraffinic	>6	-	High
White mineral oil (petroleum)	>6	-	High
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	5.1	1730	High
Amines, C12-14-tert-alkyl	2.9	-	Low

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) PAIR**: bis(2-ethylhexyl) hydrogen phosphate; 2-ethylhexyl dihydrogen phosphate; naphthalene; diphenylamine

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: zinc bis(dipentyldithiocarbamate); naphthalene; toluene

Clean Water Act (CWA) 311: naphthalene; toluene

Section 15. Regulatory information

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
TOXIC TO REPRODUCTION - Category 2

Composition/information on ingredients

Name	%	Classification
Distillates (petroleum), hydrotreated heavy paraffinic	≥10 - ≤25	ASPIRATION HAZARD - Category 1
White mineral oil (petroleum)	≤5	ASPIRATION HAZARD - Category 1
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	<1	COMBUSTIBLE DUSTS TOXIC TO REPRODUCTION - Category 2
2,5-bis(octyldithio) -1,3,4-thiadiazole	<1	ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1A
Amines, C12-14-tert-alkyl	≤0.3	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	zinc bis(dipentyldithiocarbamate)	15337-18-5	≤3
Supplier notification	zinc bis(dipentyldithiocarbamate)	15337-18-5	≤3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

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

New York : None of the components are listed.

New Jersey : The following components are listed: ZINC compounds

Pennsylvania : The following components are listed: ZINC COMPOUNDS

California Prop. 65

Section 15. Regulatory information

⚠ **WARNING**: This product can expose you to chemicals including Naphthalene, which is known to the State of California to cause cancer, and 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
Naphthalene	<0.0054211	Yes.	-
Toluene	0.001083	-	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.
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	:	At least one component is not listed.
Thailand	:	At least one component is not listed.
Turkey	:	Not determined.
United States	:	All components are active or exempted.
Viet Nam	:	Not determined.

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
TOXIC TO REPRODUCTION - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

History

Date of issue/Date of revision	:	09/12/2024
Date of previous issue	:	08/02/2023
Version	:	8

Section 16. Other information

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.

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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.