

Section 1. Identification

GHS product identifier	: Mystik® Open Gear #1.5
Synonyms	: Gear lubricant; Lubricating grease; CITGO® Material Code: 665035002 Formerly known as Mystik® OG-5 Outside Gear Grease
Material uses	: Lubricating grease
Code	: 665035002
MSDS #	: 665035002

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

Not applicable.

Supplier's details	: CITGO Petroleum Corporation P.O. Box 4689 Houston, TX 77210 sdsvend@citgo.com
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Emergency telephone number (with hours of operation)	: Technical Contact: (800) 248-4684 Medical Emergency: (832) 486-4700 CHEMTREC Emergency: (800) 424-9300 (United States Only)
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Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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Classification of the substance or mixture	: SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1B AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
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GHS label elements

Hazard pictograms



Signal word	: Danger
Hazard statements	: May cause an allergic skin reaction. May cause cancer. Toxic to aquatic life with long lasting effects.

Precautionary statements

General	: Keep out of reach of children.
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. Do not get in eyes, on skin, or on clothing. Avoid breathing dust. Contaminated work clothing must not be allowed out of the workplace.
Response	: Collect spillage. 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.

Section 2. Hazards identification

- Storage** : Store in accordance with all local, regional, national and international regulations. Store locked up. Store in a dry place and a closed container. Empty containers may contain material residues which can ignite with explosive force. Misuse of empty containers can be dangerous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers can cause fire, explosion, or release of toxic fumes from residues. Do not pressurize or expose empty containers to open flame, sparks, or heat. Keep container closed and drum bungs in place. All label warnings and precautions must be observed. Return empty drums to a qualified reconditioner. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this material.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations. Don't Pollute. Conserve Resources. Return used oil to collection centers.
- Hazards not otherwise classified** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor. Injection of petroleum hydrocarbons requires immediate medical attention. May contain or release poisonous hydrogen sulfide gas

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Gear lubricant;
Lubricating grease;
CITGO® Material Code: 665035002
Formerly known as Mystik® OG-5 Outside Gear Grease

CAS number/other identifiers

- CAS number** : Not applicable.

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated heavy naphthenic	≥25 - ≤50	64742-52-5
Asphalt (petroleum)	≥10 - ≤25	8052-42-4
Extracts (petroleum), heavy paraffinic distillate solvent	≤5	64742-04-7
Natural graphite	≤5	7782-42-5
Benzene, ethenyl-, polymer with 1,3-butadiene	≤3	9003-55-8
antimony compounds	<2	15874-48-3
molybdenum disulphide	≤2.8	1317-33-5
zinc oxide	<1	1314-13-2
Alkoxylated long chain alkyl amine	<1	***
Hydrogen sulfide	≤0.086	7783-06-4

* = Various ** = Mixture *** = Proprietary

Any concentration shown as a range is to protect confidentiality or is due to process 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.
- 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.

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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor. 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** : Treat intoxications as hydrogen sulfide exposures. In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.
- Specific treatments** : Treat symptomatically and supportively.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that gas or vapor is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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** : None known.

- Specific hazards arising from the chemical** : This material is toxic 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.

Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
phosphorus 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. 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. Collect spillage.

Methods and materials for containment and cleaning up

- Small spill** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. 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. 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 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 product residue and can be hazardous. Do not reuse container. This material may evolve hydrogen sulfide (H₂S), a highly flammable and poisonous gas. Always check for hazardous vapors and take appropriate precautions.
- 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.

Section 7. Handling and storage

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.

Bulk Storage Conditions: Do not apply heat or flame to stockpiled material. Rotate stock to reduce the potential for hot spots. Do not store with oxidizers. Minimize dust creation by keeping material moist and/or covered.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Distillates (petroleum), hydrotreated heavy naphthenic

OSHA PEL (United States, 5/2018).

TWA: 5 mg/m³ 8 hours.

ACGIH TLV (United States, 1/2022).

TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction

NIOSH REL (United States, 10/2020).

TWA: 5 mg/m³ 10 hours. Form: Mist

STEL: 10 mg/m³ 15 minutes. Form: Mist

Asphalt (petroleum)

NIOSH REL (United States, 10/2020).

CEIL: 5 mg/m³ 15 minutes. Form: Fume

ACGIH TLV (United States).

TWA: 0.5 mg/m³ 8 hours.

ACGIH TLV (United States, 1/2022).

TWA: 0.5 mg/m³, (as benzene soluble aerosol) 8 hours. Form: Inhalable fraction

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hours.

NIOSH REL (United States, 10/2020).

TWA: 5 mg/m³ 10 hours. Form: Mist

STEL: 10 mg/m³ 15 minutes. Form: Mist

OSHA PEL Z2 (United States).

TWA: 5 mg/m³ 8 hours.

Natural graphite

ACGIH TLV (United States).

TWA: 2 mg/m³ 8 hours. Form: Respirable fraction

ACGIH TLV (United States, 1/2022).

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

OSHA PEL (United States, 5/2018).

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 15 mg/m³ 8 hours. Form: Total dust

OSHA PEL (United States).

TWA: 15 mg/m³ 8 hours. Form: Total dust

OSHA PEL Z3 (United States, 6/2016).

TWA: 15 mppcf 8 hours.

antimony compounds

ACGIH TLV (United States, 1/2022).

TWA: 0.5 mg/m³, (as Sb) 8 hours.

OSHA PEL (United States, 5/2018).

TWA: 0.5 mg/m³, (as Sb) 8 hours.

NIOSH REL (United States, 10/2020).

TWA: 0.5 mg/m³ 10 hours.

Section 8. Exposure controls/personal protection

molybdenum disulphide

ACGIH TLV (United States, 1/2022).

TWA: 10 mg/m³, (as Mo) 8 hours. Form: Inhalable fraction

TWA: 3 mg/m³, (as Mo) 8 hours. Form: Respirable fraction

OSHA PEL (United States, 5/2018).

TWA: 15 mg/m³, (as Mo) 8 hours. Form: Total dust

zinc oxide

NIOSH REL (United States, 10/2020).

CEIL: 15 mg/m³ Form: Dust

TWA: 5 mg/m³ 10 hours. Form: Dust and fumes

STEL: 10 mg/m³ 15 minutes. Form: Fume

OSHA PEL (United States, 5/2018).

TWA: 5 mg/m³ 8 hours. Form: Fume

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 15 mg/m³ 8 hours. Form: Total dust

ACGIH TLV (United States).

TWA: 2 mg/m³ 8 hours. Form: Respirable

STEL: 10 mg/m³ 15 minutes. Form:

Respirable

ACGIH TLV (United States, 1/2022).

TWA: 2 mg/m³ 8 hours. Form: Respirable fraction

STEL: 10 mg/m³ 15 minutes. Form:

Respirable fraction

OSHA PEL (United States). Notes:

Respirable

TWA: 5 mg/m³ 8 hours. Form: Respirable dust

OSHA PEL (United States). Notes: Total

TWA: 15 mg/m³ 8 hours. Form: Total dust

Hydrogen sulfide

ACGIH TLV (United States, 1/2022).

TWA: 1 ppm 8 hours.

STEL: 5 ppm 15 minutes.

OSHA PEL Z2 (United States, 2/2013).

CEIL: 20 ppm

AMP: 50 ppm 10 minutes.

NIOSH REL (United States, 10/2020).

CEIL: 10 ppm 10 minutes.

CEIL: 15 mg/m³ 10 minutes.

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.

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, vapor controls, 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.

Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of 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 inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant 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.
- 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** : Avoid inhalation of gases, vapors, mists or dusts. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommend: A full-face supplied air pressure-demand respirator with escape bottle or a pressure-demand self-contained, breathing apparatus (SCBA) is required. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).

Section 9. Physical and chemical properties

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

Appearance

- Physical state** : Solid.
- Color** : Dark brown to black
- Odor** : Petroleum.
- pH** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Open cup: 218°C (424.4°F) [Cleveland]
- Evaporation rate** : <1 (n-butyl acetate. = 1)
- Lower and upper explosive (flammable) limits** : Lower: 1%
Upper: 7%
- Vapor pressure** : <0.013 kPa (<0.1 mm Hg)
- Relative vapor density** : >1 [Air = 1]
- Relative density** : 0.99
- Density gm/cm³** : Not available.
- Gravity, °API** : Estimated 11 @ 60 F
- Solubility** : Insoluble in the following materials: cold water.
- Auto-ignition temperature** : Lowest known value: 410 to 440°C (770 to 824°F) (Asphalt).
- Viscosity** : Kinematic: 1570 mm²/s (1570 cSt)
- NLGI Grade** : 1.5
- Flow time (ISO 2431)** : Not available.
- Particle characteristics**
- Median particle size** : Not available.

Section 10. Stability and reactivity

- Reactivity** : Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).
- 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	LD50 Oral	Rat	>5000 mg/kg	-
Asphalt (petroleum)	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
molybdenum disulphide	LD50 Oral	Rat	>6000 mg/kg	-
	LDLo Oral	Rat	6 g/kg	-
	LD Dermal	Rat	>2 g/kg	-
	LD Oral	Rat	>2 g/kg	-
Alkoxylated long chain alkyl amine	LD50 Oral	Rat	960 mg/kg	-
Hydrogen sulfide	LC50 Inhalation Gas.	Rat	444 ppm	4 hours

- Conclusion/Summary** : **Distillates (petroleum), hydrotreated heavy naphthenic**: Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects.
- Asphalt**: Asphalt fumes have been associated with eye, skin and respiratory tract irritation.
- Natural graphite**: Laboratory studies have associated graphite with mild pulmonary fibrotic reactions when administered to rats by intratracheal injection. Numerous epidemiological studies performed in the mining, milling and carbon electrode manufacturing industries have associated a form of pneumoconiosis with overexposure to both synthetic and natural graphite. These data are not expected to be relevant to graphic used in a grease or oil matrix.
- molybdenum disulphide**: In general, insoluble compounds of molybdenum, such as molybdenum disulfide, exhibit a low order of toxicity.

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Benzene, ethenyl-, polymer with 1,3-butadiene zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Skin : molybdenum disulphide: May cause skin irritation.

Eyes : molybdenum disulphide: May cause eye irritation.

Respiratory : molybdenum disulphide: May cause respiratory irritation.

Sensitization

Not available.

Skin : No additional information.

Respiratory : No additional information.

Mutagenicity

Not available.

Conclusion/Summary : No additional information.

Carcinogenicity

Not available.

Conclusion/Summary : No additional information.

Classification

Product/ingredient name	OSHA	IARC	NTP
Asphalt (petroleum)	-	2B	-
Benzene, ethenyl-, polymer with 1,3-butadiene	-	3	-

Reproductive toxicity

Not available.

Conclusion/Summary : No additional information.

Teratogenicity

Not available.

Conclusion/Summary : No additional information.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
molybdenum disulphide	Category 3	-	Respiratory tract irritation
Hydrogen sulfide	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Dermal.

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** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor. 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

Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : 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)
Mystik® Open Gear #1.5	N/A	3318.1	N/A	N/A	N/A
Asphalt (petroleum)	N/A	2500	N/A	N/A	N/A
antimony compounds	500	N/A	N/A	11	N/A
Alkoxylated long chain alkyl amine	960	N/A	N/A	N/A	N/A
Hydrogen sulfide	N/A	N/A	444	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Distillates (petroleum), hydrotreated heavy naphthenic	Acute EC50 >10000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >100 mg/l Fresh water Acute NOEL >100 mg/l Fresh water	Fish - Pimephales promelas Algae - Pseudokirchneriella subcapitata	96 hours 72 hours
zinc oxide	Acute IC50 1.85 mg/l Marine water Acute LC50 98 µg/l Fresh water	Algae - Skeletonema costatum Daphnia - Daphnia magna - Neonate	96 hours 48 hours
	Acute LC50 1.1 ppm Fresh water Acute EC50 62 µg/l Fresh water	Fish - Oncorhynchus mykiss Crustaceans - Gammarus pseudolimnaeus	96 hours 2 days
Hydrogen sulfide	Acute LC50 2 µg/l Fresh water	Fish - Coregonus clupeaformis - Yolk-sac fry	96 hours

Conclusion/Summary : Not available.

Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated heavy naphthenic	-	-	Inherent

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Distillates (petroleum), hydrotreated heavy naphthenic	>6	-	high
zinc oxide	-	28960	high

Mobility in soil

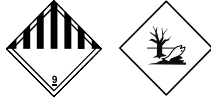
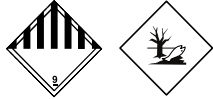
**Soil/water partition
coefficient (K_{oc})** : Not available.

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	IMDG	IATA
UN number	Not regulated.	UN3077	UN3077
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)
Transport hazard class(es)	-	9 	9 
Packing group	-	III	III
Environmental hazards	No.	Yes.	Yes.

Oil: The product(s) represented by this SDS is (are) regulated as “oil” under 49 CFR Part 130. Shipments by rail or highway in packaging having a capacity of 3500 gallons or more or in a quantity greater 42,000 gallons are subject to these requirements. In addition, mixtures containing 10% or more of this product may be subject to these requirements.

Additional information

- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.
- Mexico Classification** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- ADR/RID** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Tunnel code (-)
- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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** :
- United States inventory (TSCA 8b):** All components are listed or exempted.
 - Clean Water Act (CWA) 307:** antimony tris[O,O-dipropyl] tris(dithiophosphate); zinc oxide; ethylbenzene; chrysene; naphthalene
 - Clean Water Act (CWA) 311:** hydrogen sulphide; xylene; ethylbenzene; naphthalene

Section 15. Regulatory information

This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Hydrogen sulfide	<0.1	Yes.	500	-	100	-

SARA 304 RQ : 449964 lbs / 204283.7 kg

SARA 311/312

Classification : SKIN SENSITIZATION - Category 1
 CARCINOGENICITY - Category 1B
 HNOC - Injection Hazards
 HNOC - May Contain or Release Poisonous Hydrogen Sulfide Gas

Composition/information on ingredients

Name	%	Classification
Asphalt (petroleum)	≥10 - ≤25	CARCINOGENICITY - Category 2 HNOC - Injection Hazards HNOC - May Contain or Release Poisonous Hydrogen Sulfide Gas
Extracts (petroleum), heavy paraffinic distillate solvent	≤5	CARCINOGENICITY - Category 1B HNOC - Injection Hazards HNOC - May Contain or Release Poisonous Hydrogen Sulfide Gas
Benzene, ethenyl-, polymer with 1,3-butadiene	≤3	EYE IRRITATION - Category 2B HNOC - Injection Hazards HNOC - May Contain or Release Poisonous Hydrogen Sulfide Gas
molybdenum disulphide	≤2.8	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Injection Hazards HNOC - May Contain or Release Poisonous Hydrogen Sulfide Gas
Alkoxyated long chain alkyl amine	<1	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 HNOC - Injection Hazards HNOC - May Contain or Release Poisonous Hydrogen Sulfide Gas

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	antimony tris[O,O-dipropyl] tris(dithiophosphate)	15874-48-3	<2
Supplier notification	antimony tris[O,O-dipropyl] tris(dithiophosphate)	15874-48-3	<2

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

Section 15. Regulatory information

- Massachusetts** : The following components are listed: OIL MIST, MINERAL; ASPHALT FUMES; MINERAL OIL, PETROLEUM EXTRACTS, HEAVY PARAFFINIC DISTILLATE SOLVENT; MOLYBDENUM DISULFIDE
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: ASPHALT; MINERAL OIL (UNTREATED and MILDLY TREATED); ANTIMONY compounds
- Pennsylvania** : The following components are listed: ASPHALT; ANTIMONY COMPOUNDS
- California Prop. 65 Clear and Reasonable Warnings (2018)**

⚠ WARNING: This product can expose you to chemicals including Carbon black, which is known to the State of California to cause cancer, and Lithium carbonate, 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.

Ingredient name	%	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
carbon black, respirable powder	<0.1	Yes.	No.	-	-
lithium carbonate	<0.01	No.	Yes.	-	-
crystalline silica, respirable powder	<0.01	Yes.	No.	-	-
molybdenum trioxide	<0.01	Yes.	No.	-	-
cumene	<0.0001	Yes.	No.	-	-
ethylbenzene	<0.0001	Yes.	No.	Yes.	-
4-methylpentan-2-one	<0.0001	Yes.	Yes.	-	-
chrysene	<0.0001	Yes.	No.	Yes.	-
ethyl acrylate	trace	Yes.	No.	-	-
naphthalene	trace	Yes.	No.	Yes.	-

International regulations

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

Inventory list

- United States** : All components are listed or exempted.
- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : Not determined.
- Japan** : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.
- Malaysia** : Not determined
- New Zealand** : Not determined.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : Not determined.
- Thailand** : Not determined.
- Turkey** : Not determined.
- Viet Nam** : Not determined.

Section 16. Other information

[National Fire Protection Association \(U.S.A.\)](#)



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[Procedure used to derive the classification](#)

Classification	Justification
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 1B	Calculation method
AQUATIC HAZARD (ACUTE) - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

[History](#)

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[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)
 UN = United Nations

References : Not available.

☑ Indicates information that has changed from previously issued version.

[Notice to reader](#)

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