

Sierra Material Safety Data Sheet

Sierra International
1 Sierra Place
Lithchfield, IL 62056

Emergency: 800-424-9300

Information: 217-324-9400

SECTION 1 CHEMICAL PRODUCT IDENTIFICATION

Product: SIERRA FOGGING OIL (AEROSOL)
Synonyms/Other: NOT APPLICABLE.
MSDS Number: 0226
Item Number: 189-55000-12
Product Type: Corrosion inhibitor
Preparation/Revision Date: 06/27/2003

SECTION 2 COMPOSITION INFORMATION

INGREDIENTS	CAS #	%	OSHA TWA	OSHA STEL	ACGIH TWA	SKIN
Severely refined mineral oils	Mixture	--	5 mg/m ³ (PEL)*	10 mg/m ³	5 mg/m ³ (TLV)*	NO
Liquified gas, sweetened petroleum	68476-86-8	5-15	800 ppm	1000 ppm	--	NO
Proprietary additives	Mixture	--	--	--	--	NO

Comments:

* - applicable to oil mist, not defined for base oils.

TWA - Time Weighted Average is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.

STEL - Short Term Exposure Limit is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

SECTION 3 HAZARDOUS IDENTIFICATION

WARNING:

- COMBUSTIBLE AEROSOL
- DO NOT INTENTIONALLY INHALE
- MAY CAUSE EYE IRRITATION
- MAY CAUSE SKIN IRRITATION

Eye contact: Skin contact:

Direct contact may cause irritation, redness, tearing and blurred vision.
Avoid prolonged skin contact. This product contains materials that may cause skin irritation. Prolonged or repeated contact may result in dermatitis (dryness, chapping and reddening of skin).

Inhalation: Ingestion:

Inhaling concentrated aerosol vapors may be harmful or fatal.
In normal use ingestion is not a primary hazard. However, do not ingest. Product is expected to be relatively non-toxic unless lung aspiration occurs. Aspiration hazard is not expected due to material's heavy viscosity. Should aspiration occur, may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage and may be fatal. Signs of lung involvement include increased respiratory rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking and gagging are often noted at the time of aspiration. This product has laxative properties and may result in abdominal cramps and diarrhea.

Other:

Not applicable.

SECTION 4 FIRST AID MEASURES

Eye contact:

Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. If irritation persists seek medical attention.

Skin contact:

Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention. Wash contaminated clothing before reuse.

Inhalation:

If overcome by inhalation of vapors, remove to fresh air. Use oxygen if there is

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Ingestion:

difficulty breathing or artificial respiration if breathing has stopped. Do not leave victim unattended. Seek immediate medical attention if necessary.

Do not induce vomiting unless directed by a physician. During vomiting there is danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs keep head below hips to prevent aspiration and monitor for breathing difficulty. Gastric lavage should be performed only by qualified medical personnel. Keep affected person warm and at rest. Seek immediate medical attention.

Other:

Not applicable.

SECTION 5 FIRE FIGHTING MEASURES

Flash point:

66°C (150°F) by Tag Closed Cup Tester.

Flammable limits:

Not determined.

Extinguishing media:

Use dry chemical, foam, water fog or carbon dioxide.

Special firefighting procedures:

Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Unusual fire & explosion hazards:

Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. Heavy flammable vapors may settle along ground level and low spots to create an invisible fire hazard. The vapors may extend to sources of ignition and flash back.

Byproducts of combustion:

Oxides of carbon, calcium and sulfur. Additional byproducts include hydrogen sulfide, alkyl mercaptans and other sulfides.

Autoignition temperature:

Not determined.

Explosion data:

Not determined. Care should always be exercised in dust/mist areas.

Other:

Flame extension: <18 inches.

Flashback: No.

Aerosol containers may rupture when heated above 49°C (120°F).

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill control procedures (land):

DANGER!! LEAKING AEROSOLS ARE AN EXTREME FIRE AND EXPLOSION HAZARD!! Remove ignition sources and remove to outdoors and proceed to empty into suitable containers by depressing valve button.

Broken containers collect into plastic trash bags. Fluid from leaking containers may be picked up using shovels or rags. Collected waste should be disposed of at licensed incinerators or land-fills. If a large spill occurs notify appropriate authorities.

Spill control procedures (water):

Packaged product will sink if full, and may tend towards floating when depleted. Remove cans from water promptly and dry quickly and thoroughly to prevent rust and other damage to container.

Try to contain large spills with floating booms to prevent spill from spreading. Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard at 800-424-8802).

Waste disposal method:

All disposals must comply with federal, state, and local regulations. Aerosol containers should be discharged before disposal (collect spray into a suitable container outside, or even look for other individuals that could use the product). In some areas, the material, if spilled or discarded may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled. See Section

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14.
Other: CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture will be regulated.

SECTION 7 HANDLING AND STORAGE

Handling procedures: Keep containers closed when not in use. Do not transfer to unmarked containers. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106 -- Flammable and Combustible Liquids. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

Storage procedures: Store containers away from heat, sparks, open flame, or oxidizing materials.

Additional information: No additional information.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection: Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.

Respiratory protection: None required if airborne concentrations are maintained below threshold limits listed on page one. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air purifying respirator.

Eye protection: Eye protection is not required if material is used for the intended purpose. If material is handled such that it could be splashed into the eyes - or there is any concern, wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).

Hand protection: Impervious gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.

Other protection: Use of an apron and overboots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization and absorption. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials which cannot be decontaminated.

Local control measures: Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. If vapor or mist is generated when the material handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure. Eyewash stations and showers should be available in areas where this material is used and stored.

Other: Consumption of food and drink should be avoided in work areas where product is present. Always wash hands and face with soap and water before eating, drinking or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Vapor pressure: <1 at 20°C (68°F).
API gravity: Not applicable.
Density: 7.49 lbs/gal at 15.6°C (60.0°F).
Specific gravity: 0.90 at 15.6°C (60.0°F).
Solubility: Negligible in water, miscible in most petroleum solvents.
Percent volatile: Not determined.
Vapor density (air=1): >1 at ambient conditions.
Evaporation rate (n-Butyl Acetate=1): Not determined.
Odor: Mild petroleum, sweet odor.
Appearance: Amber to brown fluid.
Viscosity: Not determined.
Boiling point: Not determined.
Pour/Freeze point: Not determined.

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Other: Not applicable.

SECTION 10 STABILITY AND REACTIVITY

Stability: Material is stable at room temperatures and pressure.
Conditions to avoid: Avoid high temperatures and product contamination.
Incompatibility with other materials: Avoid contact with acids and oxidizing materials.
Decomposition products: Smoke, carbon monoxide and dioxide, and other aldehydes of incomplete combustion. Oxides of carbon, calcium and sulfur. Hydrogen sulfide and alkyl mercaptans and other sulfides may be released.
Hazardous polymerization: Will not occur.
Other: Not applicable.

SECTION 11 TOXICOLOGICAL INFORMATION

Oral toxicity: Not determined.
Dermal toxicity: Not determined.
Inhalation toxicity: Prolonged or repeated occupational overexposure to solvents has been linked to permanent brain and nervous system damage. Intentional misuse by deliberate concentration and inhalation may be harmful or fatal.
Dermal sensitization: On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptotic as a result of repeated small aspirations. Shortness of breath and cough are the most common symptoms. Based on data from similar materials. Prolonged or repeated contact may make skin more sensitive to other skin sensitizers. Based on data from similar materials.
Chronic toxicity: Not determined.
Carcinogenicity: Not determined.
Mutagenicity: Not determined.
Reproductive toxicity: Not determined.
Other: These products contain petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils require a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

SECTION 12 ECOLOGICAL INFORMATION

Environmental toxicity: Not determined. However, this material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.
Environmental fate: Not determined.
Other: Not applicable.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal: Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. This product unadulterated by other materials may be classified as a non-regulated waste in some areas - but still needs to be disposed of at approved facilities. Waste management should be in full compliance with federal, state, and local laws.
Disposal consideration: Most used and non-use oils and solvents are incinerated by licensed burner facilities for heat value, or reclaimed by oil recycling services. Look in a local telephone directory or internet for headings under, 'Waste', 'Waste Services', 'Waste Disposal' for companies licensed to handle such material. Additional

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information can be obtained from local EPA, DNR, Sewer and Land-Fill sites. Unused, packaged fluids may be donated to other companies or charities (fluids MUST be unused).

Other: The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can only occur in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT shipping description: Consumer Commodity.
U.S. DOT identification number: None.
U.S. DOT hazard classification: ORM-D.
Packaging class: None assigned.
Other: IMO/IATA ID Number: UN1950 / UN1950.
IMO/IATA Hazard Class: 2.1 / 2.1.
IMO Shipping Name: AEROSOLS.
IATA Shipping Name: Aerosols, flammable, n.o.s. (Petroleum naphtha).
IMO/IATA Precautionary Label: AEROSOLS statement / Flammable Gas diamond.
IMO/IATA Packing Group: II / None assigned.
IMO Page Number: 2102.
Marine Pollutant: No.

See 49 CFR for additional requirements for descriptions, allowed modes of transport, and packaging. For more information concerning spills during transport, consult latest DOT Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3.

SECTION 15 REGULATORY INFORMATION

Clean water act/oil pollution act: Under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Control Act of 1990, this material is considered an oil. Any spill or discharges that produce a visible sheen or film on surface of water, or in waterways, ditches, or sewers leading to surface water must be reported. Contact the National Response Center at 800-424-8802.

TSCA: All components of this material are listed in the U.S. TSCA Inventory.
Other TSCA: Not applicable.

SARA Title III: Section 302/304 extremely hazardous substances:
There are no components present at or greater than the de minimis concentration
Section 311, 312 hazard categorization:
Acute (immediate health effects): YES
Chronic (delayed health effects): NO
Fire (hazard): YES
Reactivity (hazard): NO
Pressure (sudden release hazard): YES

Section 313 toxic chemicals:
There are no components present at or greater than the de minimis concentration.

CERCLA: For stationary/moving sources – reportable quantity (due to):
Exempt due to petroleum exclusion.

Other: A release of this product, as supplied, is exempt from reporting under the

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Comprehensive Environmental Response Compensation and Liability Act (CERCLA) by the petroleum exclusion. However, releases may be reportable to the Nation Response Center under the Clean Water Act, 33 U.S.C. 1321(b)(3) and (5) - see head of Section 15. Failure to report may result in substantial civil and criminal penalties.

Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.

SECTION 16

OTHER INFORMATION

	NFPA 704	NPCA-HMIS	KEY
HEALTH:	1	1	0 = Minimal
FIRE:	2	2	1 = Slight
REACTIVITY:	0	0	2 = Moderate
SPECIFIC HAZARD:	NONE	N/A	3 = Serious
PROTECTION INDEX:	N/A	B	4 = Severe

Precautionary labels:

- COMBUSTIBLE AEROSOL
- DO NOT INTENTIONALLY INHALE
- MAY CAUSE EYE IRRITATION
- MAY CAUSE SKIN IRRITATION

This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used. Sierra must rely on information provided by those materials manufacturers or distributors.

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File: Sierra Fogging Oil (Aerosol) (0226)
Version: 1

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Revisions / Comments: