

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: STARFIRE ATF DEX/MERC III
SYNONYMS: Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant
PRODUCT CODE: STARFIREATFDEX/MERCIII
PRODUCT USE: Automatic Transmission Fluid
DISTRIBUTOR: Coolants Plus, Inc.
348 Circle Freeway Dr.
Cincinnati, OH 45246

EMERGENCY TELEPHONE NUMBER: CHEMTREC (800) 424-9300

CUSTOMER SERVICE: (888) 258-8723

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE

Red fluid, petroleum odor

CAUTION!**HEALTH HAZARDS**

May be harmful if swallowed.
May irritate eyes and skin.

POTENTIAL HEALTH EFFECTS

INHALATION (BREATHING): This product is not likely to present an inhalation hazard at normal temperatures and pressures. However, when aerosolizing, misting, or heating of this product, high concentrations of generated vapor or mist may irritate the respiratory tract (nose, throat, and lungs).

EYES: May cause irritation.

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SKIN: May cause irritation. Not likely to be absorbed through the skin in harmful amounts.

INGESTION (SWALLOWING): May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing respiratory tract (nose, throat, and lungs) eye and/or skin disorders may have increased susceptibility to the effects of exposure.

CHRONIC: Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

POTENTIAL ENVIRONMENTAL EFFECTS: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Wt. Percent	Component	Synonym	CAS #
0 - 95	Hydrotreated paraffinic base oil	Lubricating oil, petroleum	64742-58-1
2 - 5	Mineral Oil	Not Available	Mixture
0.7 - 1.6	Methacrylate copolymer	Not Available	Proprietary
0 - 0.4	Alkoxylated Long-chain alkyl amine	Not Available	Proprietary

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Oil mist, mineral (8012-95-1).

SECTION 4: FIRST AID MEASURES

INHALATION (BREATHING): Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

EYE: If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

SKIN: Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. If product is injected under pressure into or under the skin, or into any part of

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the body, regardless of the appearance of the wound or its size, a physician should immediately evaluate the individual as a medical emergency.

INGESTION: (SWALLOWING)

Do NOT induce vomiting. Immediately get medical attention. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything to an unconscious person by the mouth.

NOTE TO PHYSICIANS:

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED): 329°F (165°C) (minimum) (COC)

FLAMMABLE LIMITS IN AIR: Lower: Not Available Upper: Not Available

AUTOIGNITION TEMPERATURE:

Not available

HAZARDOUS COMBUSTION PRODUCTS:

Decomposition and combustion materials may be toxic. Burning may produce sulfur oxides, aldehydes, ketones, carbon monoxide and unidentified organic compounds.

CONDITIONS OF FLAMMABILITY:

Sparks or flame. Products may burn, but does not ignite readily.

EXTINGUISHING MEDIA:

Carbon dioxide, regular foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.

HAZARD RATING

0= LEAST

1= SLIGHT

2= MODERATE

3= HIGH

4= EXTREME

NFPA 704 HAZARD IDENTIFICATION

HEALTH HAZARD (BLUE)

1

FIRE HAZARD (RED)

1

REACTIVITY (YELLOW)

0

SPECIFIC HAZARD (WHITE)

FIRE FIGHTING INSTRUCTIONS:

Keep storage containers cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

FIRE AND EXPLOSION HAZARDS:

Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact or static discharge.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **Section 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary

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and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean spark-proof tool into a sealable container for disposal. Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

SECTION 7: HANDLING AND STORAGE

- HANDLING:** Keep away from sparks or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. This product has a low vapor pressure and is not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing and shoes.
- SHIPPING AND STORING:** Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain residue and can be dangerous.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

Component Exposure Limits

Hydrotreated paraffinic base oil (64742-58-1)

- ACGIH: 5mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)
- OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)
- OSHA Vacated: 5 mg/m³ TWA (related to Oil mist, mineral)
- NIOSH: 5 mg/m³ TWA (related to Oil mist, mineral)
10 mg/m³ STEL (related to Oil mist, mineral)

Mineral Oil

- ACGIH: 5mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)
- OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)

- ENGINEERING CONTROLS:** Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

- EYE PROTECTION:** Where eye contact is likely, wear safety glasses; contact lens use is not recommended.

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RESPIRATORY PROTECTION:

No respiratory protection is normally required. Use NIOSH-certified P- or R-series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

SKIN PROTECTION:

Where skin contact is likely, wear neoprene, nitrile or equivalent protective gloves; use of natural rubber or equivalent gloves is not recommended. When product is heated and skin contact is likely, wear heat-insulating gloves, boots, and other protective clothing.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant face shield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

PERSONAL HYGIENE:

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with these products.

OTHER PROTECTIVE EQUIPMENT:

Where spills and splashes are likely, facilities storing or using these products should be equipped with emergency eyewash and shower, both equipped with clean water, in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE

Red liquid

ODOR:

Petroleum odor

ODOR THRESHOLD:

Not available

MOLECULAR WEIGHT:

Not applicable

SPECIFIC GRAVITY:

0.87 (Estimated) (water=1) (approximately)

VAPOR DENSITY:

>1 (Air = 1)

VAPOR PRESSURE:

less than 0.1 mm Hg at 68°F (20°C)

RELATIVE DENSITY:

0.865 g/cm³ at 60°F (15.5°C)

INITIAL BOILING POINT:

High

BOILING RANGE

Not available

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FREEZING/MELTING POINT: Not available
pH: Not applicable
EVAPORATION RATE: Not available
SOLUBILITY IN WATER: Insoluble
FLASH POINT: 329°F (165°C) (minimum) Cleveland Open Cup
FLAMMABILITY: Not available
FLAMMABLE LIMITS IN AIR: **LOWER:** Not available **UPPER:** Not available
AUTOIGNITION TEMPERATURE: Not available

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures. Avoid sparks, or flame.
INCOMPATIBILITY: Avoid oxidizing agents.
REACTIVITY: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.
HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. Also see **Section 5: HAZARDOUS COMBUSTION PRODUCTS.**

SECTION 11: TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: Skin, Eyes, Ingestion, and Inhalation.
ACUTE EFFECTS: May be harmful if swallowed. May irritate eyes and skin. May cause Throat irritation, nausea, vomiting and diarrhea. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.
REPEATED DOSE EFFECTS: Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).
SENSITIZATION: Based on best current information, there is no known human sensitization associated with this product.

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MUTAGENICITY:	Experimental evidence suggests that this product does not cause mutagenesis.
CARCINOGENICITY	Based on best current information, there is no known carcinogenicity as regulated by OSHA; as categorized by ACGIH A1 or A2 substances; as categorized by IARC Group 1 Group 2A, or Group 2B agents as either known carcinogens or substances for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.
REPRODUCTIVE TOXICITY:	Based on best current information, there is no known reproductive toxicity associated with this product.
TERATOGENICITY:	Based on best current information, there is no known teratogenicity associated with this product.
NEUROTOXICITY:	High vapor / aerosol concentrations (attainable only at elevated temperatures) may cause central nervous system effects such as dizziness, drowsiness or headaches.

TOXICITY DATA:

Component Analysis – LD50/LC50

Hydrotreated paraffinic base oil (64742-58-1)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rat >2000 mg/kg

Dermal LD50 Rabbit >4480 mg/kg

Mineral Oil

Dermal LD50 Rabbit >5000 mg/kg

Oral LD50 Rat >5000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: Material expected to be harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment.

Component Analysis – Ecotoxicity – Aquatic Toxicity

Hydrotreated paraffinic base oil (64742-58-1)

Test & Species

96 Hr LC50 Brachydanio rerio – 79.6 mg/L (conditions: semi-static)

96 Hr LC50 Pimephales promelas – 3.2 mg/L (condition: semi-static)

PERSISTENCE/ DEGRADABILITY: Not readily biodegradable.

BIOACCUMULATIVE POTENTIAL: No information available for the product.

MOBILITY IN ENVIRONMENTAL MEDIA: Base oil component(s) – Low solubility and floats; expected to migrate from water to the land.

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OTHER ADVERSE EFFECTS: Not available.

OCTANOL/WATER PARTITION COEFFICIENT: Not available.

VOLATILE ORGANIC COMPOUNDS: Negligible

AQUATIC RELEASE: Advise authorities if product has entered or may enter watercourses or sewer drains.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste.

USEPA WASTE CODES: This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, it must be managed in accordance with 40 CFR Part 279. Processing, use, or contamination by user may change the waste code(s) applicable to the disposal of these products.

SECTION 14: TRANSPORT INFORMATION

LAND (DOT): Not regulated as a hazardous material for Land Transport.
(Shipping Name)

LAND (TDG): Not regulated as a dangerous good for Land Transport.
(Shipping Name)

EMERGENCY RESPONSE GUIDE NUMBER: Not applicable
Reference *North American Emergency Response Guidebook*.

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

SARA SECTIONS 302, 304 Based on the ingredients listed in **SECTION 3**, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

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SARA SECTIONS 311 AND 312 REPORTING

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Physical Fire	No
Physical Sudden Release of Pressure	No
Physical Reactive	No

SARA SECTION 313

This product is not subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

CERCLA

Based on the ingredients listed in **SECTION 3**, this product does not contain any "hazardous substances" listed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

CALIFORNIA: This product contains a component that list the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm: Ethyl acrylate.

TSCA: All components listed in **SECTION 3** are listed on, or are exempted from the requirements.

SECTION 16: OTHER INFORMATION

DATE ISSUED: February 15, 2011

SUPERSEDES: April 13, 2010

REVISION NO. 4

REVISION INFORMATION: MSDS update.

LABEL/OTHER INFORMATION: Not available.

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