

Safety Data Sheet

Issue Date: 9/30/2013

SDS: TO-4 Hydraulic Fluid

Section 1	Product Identification
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Common Name	Power Transmission Fluid
Trade Name	STARFIRE TO-4 Hydraulic Fluid SAE 10, 30, 50, 60
Supplier:	Coolants Plus, Inc. 2570 Van Hook Ave. Hamilton, OH 45015
MSDS Requests/ Product Information:	888-258-8723 (Monday -Friday 8 A.M. - 5 P.M.)

Section 2	Hazards Identification
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Warning! Contact with skin or eyes may result in irritation. Ingestion (swallowing) may result in GI tract irritation or stomach discomfort. Inhalation of oil mists or heated oils may result in respiratory tract (lung, throat, nose, and airways) irritation. Slip hazard when spilt.

HMIS Codes

Health	Fire	Reactivity
0	1	0

Section 3	Products/Ingredients
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Components	CAS Number	Amount
Highly Refined Mineral Oil	Mixture	80-90%

Section 4	First Aid Measures
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Oral	DO NOT INDUCE VOMITING. Get immediate medical attention
Eyes	Flush with water at least 15 minutes. Get medical attention if eye irritation develops or persists
Skin	Wash with soap and water. Get medical attention if irritation develops. Launder contaminated clothing before reuse.
Inhalation	Removed exposed person to fresh air if adverse affects are observed
Additional Information	Note to physician: Treat symptomatically

Section 5	Fire Fighting Measures
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Flash Point: 200 Deg C, 392 Deg F (min)

Extinguishing Media: Use foam, dry chemical or carbon dioxide (CO₂) to extinguish flames. Do not use direct stream of water. Product will float and can be reignited on surface of water.

Fire Fighting Procedures: Recommend wearing self-contained breathing apparatus and turn out gear.

Unusual Fire and Explosion Hazards: Toxic fumes, gases or vapors may evolve on burning such as carbon monoxide and dioxide as well as sulfur oxides.

Section 6	Accidental Release Measures
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Spill Procedures:

Personal Protective Equipment must be worn (see Section 8 for PPE). Keep all unnecessary personnel away. Eliminate all sources of ignition. Ventilate area if spilled in confined space or other poorly ventilated areas. Product is water pollutant. Prevent entry into sewers, drains, and water ways by diking spill with sand, earth or other appropriate material. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Check under Transportation and Labeling (DOT/CERCLA) and Other Regulatory Information Section (SARA) for hazardous substances to determine regulatory reporting requirements for spills.

Section 7	Handling and Storage
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General Precautions: Use local exhaust ventilation if there is a risk of inhalation of vapors, mists or aerosols. Properly dispose of any contaminated rags and PPE or cleaning materials to prevent fire. Keep out of reach of children. Prevent product from entering waterways or contaminating soil.

Handling Procedures: Avoid prolonged or repeated exposure to skin as well as contact with eyes. Avoid inhalation of mists or vapors. If handling drums, safety footwear should be worn and proper handling equipment should be used.

Storage Procedures: Keep containers tightly closed and stored in a cool, well ventilated area. Properly labeled bottles should be used. Wash thoroughly after handling. Empty container contains product residue which may exhibit hazards of product and should be disposed of properly.

Section 8	Exposure Control and Personal Protective Equipment
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Ventilation Procedures Use with adequate ventilation.

Gloves Procedures PVC Neoprene or Nitrile Gloves should be suitable. Due to the variances in working conditions and glove types the distributor should be consulted as to the best option. Always wash hands after use

Eye Protection Safety glasses or face shield.

Respiratory Protection Under normal use conditions, respirator is not usually required. Use NIOSH/MSHA approved disposable dust/mist mask if the recommended exposure limit is exceeded.

Clothing Recommendation Long sleeve shirt is recommended.

Section 9	Physical and Chemical Properties
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Flash Point 200 °C, 392°F (min)

Vapor Pressure Not available

Density 0.86-0.88 g/cm³

Water Solubility Insoluble

Odor Mild hydrocarbon smell

Appearance Yellowish Liquid

Viscosity @ 100°C ~9 cSt

Viscosity Index 130-135

Pour Point Temperature >-10°C

The above data are typical values and do not constitute a specification.

Section 10	Reactivity and Stability
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Stability	Material is normally stable at moderately elevated temperatures.
Decomposition Temperature	Not Determined
Incompatibility	Oxidizing agents.
Polymerization	Will not occur.
Thermal Decomposition	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

Section 11	Toxicological Information
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--ACUTE EXPOSURE

Oral Toxicity	The LD50 in rats is > 5000mg/kg based on data from components or similar materials.
Eye Irritation	This product can cause mild eye irritation with short term contact.
Skin Irritation	Not expected to be a primary skin irritant based on data from components or similar materials. Prolonged exposure or repeated skin contact as from clothing with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.
Inhalation Sensitization	No data available to indicate product or components may be respiratory sensitizers. Oil mist may be respiratory irritant.

--CHRONIC EXPOSURE

Chronic Toxicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.
Carcinogenicity	This material is formulated with mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC.
Mutagenicity	No data available to indicate product or components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive Toxicity	No data available to indicate product or components present at greater than 0.1% that may cause reproductive toxicity.
Teratogenicity	No data available to indicate product or components present at greater than 0.1% may cause birth defects.
Other	No other health hazards known.
Exposure Limits	Contains mineral oil. Under conditions which may generate mists, observe OSHA PEL of 5 mg/cm ³ , ACGIH STEL of 10 mg/cm ³

Section 12	Ecological Information
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Ecotoxicological data have not been determined specifically for this product. Information given is based on knowledge of the components and similar products.

Ecotoxicity	Poorly soluble mixture. Not expected to be harmful to aquatic life. May cause physical fouling of aquatic organisms. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.
Environmental Fate	This material is not expected to be readily biodegradable.

Section 13	Disposal Considerations
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Waste Disposal	Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal or recycling methods.
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Section 14	Transportation Information
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US Department of Transportation Classification	This material is not subject to DOT regulations under 49 CFR Parts 171-180
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Oil: This material is an "Oil" under 49 CFR part 130 when transported in a container of 3500 gallon capacity or greater.

Section 15	Regulatory Info
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Superfund Amendment & Reauthorization Act (SARA) Title III:	This material is not regulated under SARA Title III
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Toxic Substances Control Act (TSCA) Status:	Component(s) of this material is (are) listed on the EPA/TSCA Inventory of Chemical Substances.
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State Regulation

This material is not regulated by the California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

This product is listed in the New Jersey Right-to-Know Chemical List and the Pennsylvania Right-

to-Know Chemical List as petroleum.

Section 16	Other Information
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US NFPA Codes

Health	Fire	Reactivity
0	1	0

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.