

**Material Safety Data Sheet**  
**EcoSafe® FR-46**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

<b>1</b>	<b>Substance/Product Identification</b>
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**Product Trade Name** EcoSafe® FR-46  
**CAS Number** Confidential.  
**Synonyms** None.  
**Generic/Chemical Name** Confidential.  
**Product Use** Hydraulic fluid.  
**Prepared By** American Chemical Technologies, Inc. – Lab (517) 223-0300  
**Preparation/Revision Date** 14 December 2005  
**Transportation Emergency Phone No.** INFOTRAC 1-800-535-5053  
  
**WHMIS Hazard Class** Not a controlled product  
**HMIRC Registry Number** Not Registered  
**HMIRC Exemption** Not Registered  
**HMIRC Filing/Grant Date** Not applicable.

<b>2</b>	<b>Composition/Information on Ingredients</b>
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**Hazardous Ingredients** This material contains no ingredients requiring disclosure under regulatory hazard criteria for this jurisdiction. See Section 11 for additional details.

<b>3</b>	<b>Hazards Identification</b>
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**Principal Hazards** CAUTION.  
• MAY CAUSE EYE IRRITATION.

*See Section 11 for complete health hazard information.*

<b>4</b>	<b>First Aid Measures</b>
<b>Ingestion</b>	DO NOT INDUCE VOMITING. If conscious, give 1 glass of water. Get immediate medical attention. If vomiting occurs naturally, the casualty should lean forward to reduce the risk of aspiration
<b>Eyes</b>	Flush immediately with water for at least 15 minutes. Get immediate medical attention.
<b>Skin</b>	Wash with soap and water. Get medical attention if irritation develops. Launder contaminated clothing before reuse.
<b>Inhalation</b>	Remove exposed person to fresh air if adverse effects are observed.
<b>Additional Information</b>	Note to physician: Treat symptomatically.
<b>5</b>	<b>Fire Fighting Measures</b>
<b>Flash Point</b>	251 Deg C, 484 Deg F COC (Typical)
<b>Extinguishing Media</b>	CO2, dry chemical, or foam. Water can be used to cool and protect exposed material.
<b>Firefighting Procedures</b>	Recommend wearing self-contained breathing apparatus. Water may cause splattering.
<b>Unusual Fire &amp; Explosion Hazards</b>	Toxic fumes, gases or vapors may evolve on burning.
<b>6</b>	<b>Accidental Release Measures</b>
<b>Spill Procedures</b>	Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Ventilate area if spilled in confined space or other poorly ventilated areas. Prevent entry into sewers and waterways. 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.
<b>7</b>	<b>Handling and Storage</b>
<b>Pumping Temperature</b>	Not available.

<b>Maximum Handling Temperature</b>	Not available.
<b>Handling Procedures</b>	Keep containers closed when not in use. Wash thoroughly after handling. Empty container contains product residue which may exhibit hazards of product.
<b>Maximum Storage Temperature</b>	Not available.
<b>Storage Procedures</b>	No special storage precautions required.
<b>Loading Temperature</b>	Not available.

<b>8</b>	<b>Exposure Controls/Personal Protection</b>
<b>Other Exposure Limits</b>	See Hazardous Ingredients Section for any applicable exposure limits for components.
<b>Engineering Controls</b>	Use local exhaust ventilation to control mists or vapors.
<b>Gloves Procedures</b>	Use nitrile or neoprene gloves.
<b>Eye Protection</b>	Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.
<b>Respiratory Protection</b>	Use full face respirator with a combination organic vapor and dust/mist cartridge if the recommended exposure limit is exceeded.
<b>Clothing Recommendation</b>	Long sleeve shirt is recommended.

<b>9</b>	<b>Physical and Chemical Properties</b>
<b>Flash Point</b>	251 Deg C, 484 Deg F COC (Typical)
<b>Upper Flammable Limit</b>	Not available.
<b>Lower Flammable Limit</b>	Not available.
<b>Autoignition Point</b>	Not available.
<b>Explosion Data</b>	Material does not have explosive properties.
<b>Vapour Pressure</b>	Not available.
<b>pH</b>	Not available.
<b>Specific Gravity</b>	1 (25 Deg C)
<b>Bulk Density</b>	Not available.
<b>Water Solubility</b>	< 1g / 100g @ 25°C
<b>Percent Volatile</b>	Unknown.
<b>Percent VOC</b>	Not available.
<b>Vapour Density</b>	Not available.
<b>Evaporation Rate</b>	Not available.

<b>Odor</b>	Mild
<b>Appearance</b>	Clear Liquid.
<b>Viscosity</b>	41.1 Centistokes (40 Deg C)
<b>Odor Threshold</b>	Unknown.
<b>Boiling Point</b>	Not available.
<b>Pour Point Temperature</b>	Not available.
<b>Melting / Freezing Point</b>	Not available.

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

<b>10</b>	<b>Stability and Reactivity</b>
<b>Stability</b>	Material is normally stable at moderately elevated temperatures and pressures.
<b>Decomposition Temperature</b>	Not available.
<b>Incompatibility</b>	Strong oxidizing agents.
<b>Polymerization</b>	Will not occur.
<b>Thermal Decomposition</b>	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.
<b>11</b>	<b>Toxicological Information</b>

**-- ACUTE EXPOSURE --**

<b>Oral Toxicity</b>	The LD50 in rats is between 2000 mg/kg and 5000 mg/kg. Based on data from components or similar materials. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain.
<b>Eye Irritation</b>	Weak to moderate eye irritant. Does not meet Canadian D2B or EU R36 criteria. Based on data from components and similar materials.
<b>Skin Irritation</b>	Not expected to be a primary skin irritant. Based on data from components or similar materials. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.
<b>Dermal Toxicity</b>	The LD50 in rabbits is > 2000 mg/Kg. Based on data from components or similar materials.
<b>Inhalation Toxicity</b>	No data available to indicate product or components may be a toxic inhalation hazard.
<b>Respiratory</b>	If material is misted or if vapors are generated from heating,

<b>Irritation</b>	exposure may cause irritation of mucous membranes and the upper respiratory tract. Based on data from components or similar materials. Under good industrial hygiene practices where all exposure limits are observed, respiratory irritation should not be a problem.
<b>Dermal Sensitization</b>	No data available to indicate product or components may be a skin sensitizer.
<b>Inhalation Sensitization</b>	No data available to indicate product or components may be respiratory sensitizers.

**-- CHRONIC EXPOSURE --**

<b>Chronic Toxicity</b>	No data available to indicate product or components present at greater than 1% are chronic health hazards.
<b>Carcinogenicity</b>	No data available to indicate any components present at greater than 0.1% may present a carcinogenic hazard.
<b>Reproductive Toxicity</b>	No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.
<b>Teratogenicity</b>	No data available to indicate product or any components contained at greater than 0.1% may cause birth defects.
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**-- ADDITIONAL INFORMATION --**

<b>Other</b>	No other health hazards known.
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<b>12</b>	<b>Ecological Information</b>
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**-- ENVIRONMENTAL TOXICITY --**

<b>Freshwater Fish Toxicity</b>	The acute LC50 is 100 - 1000 mg/L based on similar products.
<b>Freshwater Invertebrates Toxicity</b>	Not available.
<b>Algal Inhibition</b>	Not available.
<b>Saltwater Fish Toxicity</b>	Not available.
<b>Saltwater Invertebrates Toxicity</b>	Not available.
<b>Bacteria Toxicity</b>	Not available.
<b>Miscellaneous Toxicity</b>	Not available.

**-- ENVIRONMENTAL FATE --**

<b>Biodegradation</b>	This product will biodegrade very rapidly based on OECD 301-type test data for similar products.
<b>Bioaccumulation</b>	1 - 10% of the components potentially bioconcentrate, based on measured octanol/water partition coefficients.
<b>Soil Mobility</b>	Not available.

<b>13</b>	<b>Disposal Consideration</b>
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<b>Waste Disposal</b>	This material, if discarded, is not a hazardous waste under RCRA Regulation 40 CFR 261.
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<b>14</b>	<b>Transport Information</b>
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<b>ICAO/IATA</b>	Not regulated
<b>IMDG</b>	Not regulated
<b>IMDG EMS Fire</b>	Not applicable.
<b>IMDG EMS Spill</b>	Not applicable.
<b>IMDG MFAG</b>	Not applicable.
<b>IMO Marine Vessel</b>	DO NOT TRANSPORT - ADDITIONAL INFORMATION REQUIRED
<b>USCG Compatibility</b>	Not available.
<b>TDG Bulk</b>	Not regulated
<b>TDG Non-Bulk</b>	Not regulated
<b>U.S. DOT Bulk</b>	Not regulated
<b>U.S. DOT Non-Bulk</b>	Not regulated
<b>DOT NAERG</b>	Not applicable.
<b>Bulk Quantity</b>	85000 liters, 22457 gal.
<b>Non-Bulk Quantity</b>	207.8 liters, 55 gal.

*Review classification requirements before shipping materials at elevated temperatures*

<b>15</b>	<b>Regulatory Information</b>
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<b>U.S. TSCA Inventory</b>	All components of this material are on the US TSCA Inventory or are exempt.
<b>Other TSCA Reg.</b>	Section 8d (10H-Phenothiazine). Section 8d (Vinyl acetate (Acetic acid, ethenyl ester)).
<b>SARA Ext. Haz. Subst.</b>	This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances list.
<b>SARA Section 313</b>	This product does not contain greater than 1.0% (greater than 0.1% for carcinogenic substance) of any chemical substances listed under SARA Section 313.

<b>TDG Regulated Limits</b>	None known.
<b>CERCLA Hazardous Substances</b>	None known.
<b>Cal. Prop. 65</b>	This product is not known to contain any chemicals known to the state of California to cause cancer or birth defects. However, we do not conduct routine analysis for all listed materials.
<b>U.S. Fuel Registration</b>	Not applicable.
<b>U.S. Dept of Agriculture</b>	This product has not been filed with the USDA to support H2 approvals.
<b>NSF Nonfood Compounds Registration</b>	Not available.
<b>U.S. Tariff Heading Number</b>	3811.29.00.00
<b>Schedule B Number</b>	3811.29.0000
<b>FDA Approval</b>	Not applicable.
<b>EEC EINECS</b>	All components are in compliance with the EC Seventh amendment Directive 92 /32/EEC.
<b>Finnish Registration Number</b>	Not Registered
<b>Sweden Registration Number</b>	Not Registered
<b>Norway Registration Number</b>	Not Registered
<b>Danish Registration Number</b>	Not Registered
<b>Switzerland Bag T Registration Number</b>	Not Registered
<b>Japan METI</b>	All components are in compliance with the Chemical Substances Control Law of Japan.
<b>Australia</b>	All components are in compliance with chemical notification requirements in Australia.
<b>Canada</b>	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
<b>Switzerland</b>	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
<b>Korea</b>	All components are in compliance in Korea.
<b>Korean Registration</b>	Not Registered

**Number**

**Philippines** All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

**China** All components of this product are listed on the Inventory of Existing Chemical Substances in China.

**China Registration Number** Not Registered

**New Zealand Registration Number** Not Registered

**Malta Registration Number** Not Registered

**Ukraine Registration Number** Not Registered

<b>16</b>	<b>Other Information</b>
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<b>US NFPA Codes</b>	<b>Health</b>	<b>Fire</b>	<b>Reactivity</b>	<b>Special</b>
	2	1	0	N/E

<b>HMIS Codes</b>	<b>Health</b>	<b>Fire</b>	<b>Reactivity</b>
	2	0	0

**Precautionary Labels****CAUTION.**

- **MAY CAUSE EYE IRRITATION.**

<b>Revision Indicators</b>	Section: 2 CANADIAN HAZARDOUS INGREDIENTS	Changed: 23 August 2005
	Section: 5 FLASH POINT	Changed: 14 December 2005
	Section: 9 FLASH POINT	Changed: 14 December 2005
	Section: 15 OTHER TSCA REGULATIONS	Changed: 23 August 2005
	Section: 16 HMIS CODES	Changed: 2 March 2005
	Section: 16 NFPA CODES	Changed: 2 March 2005

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