

**MATERIAL SAFETY DATA SHEET**

**DYNALENE HF-LO**

**SECTION 1: PRODUCT IDENTIFICATION**

**Material Identification**

PRODUCT NAME: **DYNALENE HF-LO** Heat Transfer Fluid  
 CHEMICAL FAMILY: MIXTURE

**Company Identification**

MANUFACTURER	TELEPHONE NUMBERS
Dynalene Inc	Product Information: 610.262.9686
5250 West Coplay Road	Emergency Phone: CHEMTREC 800.424.9300
Whitehall, PA 18052	

**Date of Preparation**

November 9, 2005

**Revision Date**

January 7, 2008

**SECTION 2: COMPOSITION /INFORMATION ON INGREDIENTS**

<u>MATERIAL</u>	<u>CAS Number</u>	<u>Wt.%</u>	<u>OSHA PEL (TWA)</u>	<u>ACGIH TLV (TWA)</u>	<u>EU Classification</u>
Aliphatic Hydrocarbon Blend	Proprietary	<100%	-----	-----	-----
Additives	Proprietary	Balance	-----	-----	-----

*NE = Not Established      C = Ceiling Level See Section 16 for Definitions of Terms Used.*  
**NOTE:** All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format. This product is hazardous as defined in 29 CFR 1910.1200. OSHA HAZARD: Combustible

**SECTION 3: HAZARD IDENTIFICATION**

**EMERGENCY OVERVIEW**

**Physical Appearance:**

This product is a clear, colorless, to slightly yellow, combustible liquid.

**Immediate Concerns:**

Vapors and mists from this product may be irritating, if inhaled. The product can be irritating to contaminated skin or eyes. The product will ignite and burn at elevated temperatures in the presence of an ignition source. If involved in a fire, this liquid will release toxic gases. This product is not reactive under typical emergency response conditions.

**Inhalation**

High vapor / aerosol concentrations (attainable at elevated temperatures well above ambient) are irritating to the eyes and the respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death effects, including death.

**Eyes**

Slightly irritating, but does not injured eye tissue.

**Skin**

Low order of toxicity; frequent or prolonged contact may irritate and cause dermatitis. Skin contact may aggravated an existing dermatitis condition

**Ingestion**

Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing death.

**HAZARDOUS MATERIAL INFORMATION SYSTEM**

	<u>HMIS</u>
<b>HEALTH</b>	<b>1</b>
<b>FLAMMABILITY</b>	<b>2</b>
<b>REACTIVITY</b>	<b>0</b>

*KEY: 4= Severe      3= Serious;      2= Moderate      1=Slight      0=Minimal*

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**SECTION 4:                      FIRST-AID MEASURES**

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**Skin Exposure**

Flush with large amounts of water: use soap if available. Remove grossly contaminated clothing, including shoes, and launders before reuse.

**Eye Exposure**

Flush eyes with large amounts of water; until irritation subsides. If irritation persists, get medical attention.

**Inhalation**

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is topped. Keep at rest. Call for prompt medical attention.

**Ingestion**

If the product is swallowed, DO NOT induces vomiting. Keep at rest. Get prompt medical attention.

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**SECTION 5:                      FIRE-FIGHTING MEASURES**

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**Flammable properties**

FLASH POINT: > 61°C (>141°F) (Closed Cup)

AUTOIGNITION: > 337°C (> 640°F)

**FLAMMABLE LIMITS:**

Lower (LEL): 0.6

Upper (UEL): 4.5

**HAZARDOUS COMBUSTION PRODUCTS:** Combustible liquid can form combustible mixtures at temperatures at or above the flash point. Static Discharge, material can accumulate static charges, which can cause an incendiary electrical discharge. "Empty" containers retain product residue (liquid/or vapor) and can be dangerous. DO NOT pressurize, cut weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition: **THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.** Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioned, or properly disposed of.

**Extinguishing Media:**

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

**Fire-Fighting Instructions:**

Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Avoid spraying

water directly into storage containers due to danger of boil over. This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

### **NFPA Hazard Ratings**

	<b><u>NFPA</u></b>
<b>Health:</b>	<b>1</b>
<b>Flammability:</b>	<b>2</b>
<b>Reactivity:</b>	<b>0</b>

*KEY: 4= Severe      3= Serious      2= Moderate      1=Slight      0=Minimal*

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## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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### **Spill and leak Response**

Eliminate sources of ignition. Proper protective equipment should be used. Prevent liquid from entering sewers, watercourses, or low areas. Contain the spilled liquid with sand or earth. Do not use combustible materials such as sawdust. Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent. In event of a non-incidentally released, use non-sparking tools and have adequate fire protection. Absorb spilled liquid with polypads or other suitable absorbent materials. Decontaminate the area thoroughly. If necessary, decontaminate spill response equipment with soap and water solution. Place all spill residues in a suitable container and seal. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations (see Section 13, Disposal Considerations).

**WATER SPILL:** Eliminate sources of ignition. Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear. Remove from surface by skimming or with suitable adsorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

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## **SECTION 7: HANDLING AND STORAGE**

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### **Storage and Handling Practices**

Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials. DO NOT handle or store near an open flame, heat or other sources of ignition. Protect material from direct sunlight. Material will accumulate static charges; this may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures. Do NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. Do NOT reuse empty containers without commercial cleaning or reconditioning.

### **Electrostatic Accumulation Hazard**

Yes, use proper bonding and/or grounding procedure.

### **Storage/Transport Temperature**

Ambient

### **Loading/ Unloading Viscosity**

2.0 cSt

### **Storage/ Transport Pressure**

Atmospheric

### **Load/ Unload Temperature**

Ambient

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**SECTION 8: EXPOSURE CONTROLS-PERSONAL PROTECTION**

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**Engineering Controls**

The use of local exhaust ventilation is recommended to control process emission near the source. Laboratory samples should be handled in a lab hood. Provide mechanical ventilation of confined spaces. See respiratory protection recommendations.

**Personal Protective Equipment**

RESPIRATORY PROTECTION: None needed for normal circumstances of use. Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134 or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown potential for overexposure. TWA of 1200mg/m<sup>3</sup> (171ppm) based on total hydrocarbon.

EYE PROTECTION: Wear safety glasses with side shields or chemical goggles.

HAND PROTECTION: Wear long sleeve and chemical resistant gloves.

BODY PROTECTION: If potentials for significant exposure to liquid exist, use full protective clothing and chemical boots.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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RELATIVE VAPOR DENSITY (air = 1):	Not Available.
EVAPORATION RATE (n-BuAc=1):	0.1
SPECIFIC GRAVITY @ 1 aym(Air = 1):	5.9 Calculated
MELTING POINT or RANGE:	Approx. - 71°F (Pour Point)
SOLUBILITY IN WATER:	< 1.0% (practically insoluble)
BOILING POINT:	>191°C (> 376°F)
VAPOR PRESSURE, mm Hg @ 68 °F:	< 1.0
VISCOSITY:	2.0 @ 77°F
ODOR:	Not Available.
PHYSICAL STATE:	Liquid
pH:	Not applicable.

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**SECTION 10: STABILITY AND REACTIVITY**

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**Chemical Stability**

Stable at normal temperatures and storage conditions

**Decomposition**

None expected.

**Incompatibility with Other Materials**

May react with strong oxidizers

**Hazardous Polymerization**

Will not occur

**Conditions to Avoid**

Not applicable

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**General Toxicity Information**

Please refer to Section 3 for available information on potential health effects.

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**SECTION 12: ECOLOGICAL INFORMATION**

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**Environmental Fate & Ecotoxicity Data**

ECOTOXICOLOGICAL INFORMATION: Not available.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product may be harmful to contaminated plant and animal life (especially if large quantities are released). Refer to Section 11 (Toxicological Information) for specified information regarding effects of this product's components on test animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product may be harmful to aquatic life if large quantities are released into bodies of water.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**Waste Disposal**

Waste disposal must be in accordance with appropriate Federal, State, and local regulations or those of Canada and its Provinces. Please refer to Section 5, 6 and 15 for disposal and regulatory information.

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**SECTION 14: TRANSPORTATION INFORMATION**

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**Shipping Information**

In containers of 119 gallons capacity or less, this product is not regulated by U.S. DOT

Proper Shipping Name:	Petroleum Distillate, N.O.S.
Hazard Class Number and Description:	Combustible Liquid
UN Identification Number	UN 1268
Packing Group	III
DOT label(s) required:	None

**Marine Pollutant**

No component of this product is classified as a Marine Pollutant, as listed in Appendix B to 49 CFR 172.101.

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**SECTION 15: REGULATORY INFORMATION**

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**US Federal Regulations****A: General Product Information**

This information may be subject to the provisions of the Community Right-to-Know Reporting Requirements (40 CFR 370) if threshold quantity criteria are met.

**B: Component Analysis**

SARA SECTION 302/304 STATUS: Contains no chemicals subject to SARA 302/304 reporting.

SARA SECTION 311/312: Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Regulations Act, this product is classified in to the following categories: Fire

SARA SECTION 313 CHEMICALS: Contains no chemicals subject to SARA 313 reporting.

TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

CERCLA: If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation Liability Act. We recommend you contact local authorities to determine if there may be other local reporting requirements.

CLEAN WATER ACT/OIL POLLUTION ACT: This product is classified as oil under Section 311 of Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990. Discharge or spills which produce a visible sheen on either surface water, or in

waterways/sewers which lead to surface must be reported to the National Response Center.

### **C: Additional Canadian Regulations**

CANADIAN DSL: The components of this product are listed on the Canadian Domestic Substance List Inventory Listing (DSL).

CANADIAN WHMIS SYMBOLS: Flammable and combustible materials/ Combustible Liquid

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## **SECTION 16: OTHER INFORMATION**

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### **PREPARED BY:**

DYNALENE INC  
5250 West Coplay Road  
Whitehall, PA 18052  
610-262 – 9686

### **Date of Printing:**

January 7, 2008.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Dynalene Inc assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Dynalene Inc assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

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## **DEFINITIONS OF TERMS**

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### **Key/Legend**

ppm = parts per million; mg/m<sup>3</sup> = milligrams per cubic meter of air; mppcf = million of particles per cubic foot of air; f/cc = fibers per cubic centimeter of air; OSHA = Occupational Safety and Health Administration; ACGIH = American Conference of Governmental Industrial Hygienists; TLV = Threshold Limit Value; TWA = 8-hour, time-weighted average; STEL = short-term exposure limit; EPA = Environmental Protection Agency; TSCA = Toxic Substances Control Act; DSL = Canada Domestic Substances List; EINECS = European Inventory of Existing Commercial Chemical Substances; ECL = Korea Existing and Evaluated Chemical Substances Inventory; ENCS = Japan Existing and New Chemical Substances Inventory; PICCS = Philippines Inventory of Chemicals Substances; AICS = Australia Inventory of Chemicals Substances; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; PMN = Premanufacture Notification; DSL = Domestic Substance List; NFPA = National Fire Protection Association; WHMIS = Workplace Hazardous Materials Identification System; HEPA = High Efficiency Particulate Air; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act; NJTSR = New Jersey Trade Secret Registry; EPCRA = Emergency Planning and Community Right-to-Know Act (SARA, Title III); 302 = Extremely Hazardous Substance; HAP = Clean Air Act Hazardous Air Pollutant; TPQ = Threshold Planning Quantity; RQ = Reportable Quantity; NA = Not Available; NR = Not Regulated