



## MATERIAL SAFETY DATA SHEET

### I. PRODUCT INFORMATION

<b>Manufacturer</b> Radco Industries, Inc., PO Box 305 LaFox, IL 60147 USA  Emergency Phone: (630) 232-7966  Website: www.Xceltherm.com  Product Name: <b>XCEL THERM<sup>®</sup> HTR</b> Heat Transfer Fluid  Effective Date: 2010-02-09 Revision Date: 2010-09-14	<b>Emergency Phone Numbers:</b> For chemical emergency, spill, leak, fire exposure, accident or medical emergency, call:  CHEMTREC North America 1-800-424-9300 International +1 703-527-3887  For shipping emergency or off-hours rush orders call: 1-630-232-7966 or 1-630-336-6728
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### II. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS#	CONCENTRATION
Paraffinic white mineral oil	8042-47-5	> 50.0%
Blend of substituted aromatics	29589-57-9	< 50.0%

Note: Not a Hazardous Material for DOT shipping

### III. HAZARD IDENTIFICATION

#### POTENTIAL HEALTH EFFECTS

##### Ingestion

Single dose oral toxicity is low. If aspirated, may cause lung damage due to chemical pneumonia, a condition caused by petroleum and petroleum-like solvents.

##### Skin Absorption

A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts.

##### Inhalation

In general, overexposure to high atmospheric concentrations of alkyl-substituted aromatics may produce central nervous depression, headache, dizziness, nausea and loss of appetite.

##### Eye contact

May cause transient eye irritation (tears, blurred vision, and redness).

### IV. FIRST AID MEASURES

##### Ingestion

DO NOT induce vomiting. Seek medical attention immediately.

##### Skin Absorption

Wash skin with soap and water. Remove contaminated clothing. Wash clothing before re-use. Obtain medical attention if irritation persists.

##### Inhalation

In general, overexposure to high atmospheric concentrations of alkyl-substituted aromatics may produce central nervous depression, headache, dizziness, nausea and loss of appetite.

##### Eye contact

Flush eyes thoroughly with water for several minutes. Obtain medical attention if discomfort persists.



## V. FIRE-FIGHTING MEASURES

**Flash point:** > 200°C (390°F)

**Autoignition temperature:** > 371°C (700°F)

### NFPA Classification

Health: 1	Flammability: 1	Reactivity: 0	Special provisions: none
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### Special fire fighting procedures

Use water spray to cool fire-exposed containers and structures. If a rail or tank truck is involved in a fire, ISOLATE for 800 meters (0.5 mile) in all directions. Shut off fuel to fire if it is possible to do so without hazard. If this is impossible, withdraw from the area and let the fire burn out under controlled conditions. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.

### Special protective equipment for firefighters

Body covering protective clothing, full "turn-out" gear. Self-contained breathing apparatus with full face-piece operated in positive pressure mode.

### Extinguishing media

Suitable: Treat as an oil fire.

Small fires:

- CO2
- dry powder
- foam

Large fires:

- alcohol-type foam or universal-type foams
- water fog

Unsuitable: Oil will float on water and can spread any fire.

## VI. ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Wear protective clothing when taking up spill. Eliminate sources of ignition.

### ENVIRONMENTAL PRECAUTIONS

This product is insoluble in water and will float on the surface. Prevent from entering sewers or drains. Should this product enter sewers or drains, it should be pumped out into an open vessel. Emergency services may need to be called to assist in this operation.

### METHODS FOR CLEANING UP

Floor may be slippery; use care to avoid falling.

### Small spills

Absorb on inert material such as sand, earth, vermiculite.

## VII. HANDLING AND STORAGE

### Handling precautions

Never use pressure to empty drums. Keep drums tightly closed to prevent contamination. Residual vapors may explode on ignition; do not puncture, drill, grind, or weld near this container. Electrically bond and ground all containers and equipment before transfer or use of material.



## VII. HANDLING AND STORAGE continued

### Storage requirements

Normal precautions common to safe manufacturing practice should be followed in handling and storage. Store in a dry location. Keep out of strong sunlight. Keep away from heat and flame. Keep container tightly closed.

Further info

### Further information on storage

Keep away from strong oxidizing agents.

## VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

### PERSONAL PROTECTION

#### Respiratory protection

If vapor and/or mist is generated by heating, spraying, etc., wear an organic vapor respirator with a mist filter. No special respiratory protection is normally required.

#### Hand protection / protective gloves

Wear oil resistant gloves.

#### Eye protection

Face shield or chemical splash goggles in case of splashing.

#### Skin protection

Wear protective clothing, such as long sleeves to minimize skin contact.

#### Industrial hygiene measures

Remove contaminated clothing and clean it. Do not eat or drink at work.

### ENGINEERING CONTROLS

#### Ventilation

Local ventilation is needed in the presence of air borne mists.

#### Exposure limits

Component	Type	Value	Remark
Mineral Oil Mist	TWA (mist), ACGIH	5.0 mg/m <sup>3</sup>	If used in a way that generates a "mist", observe the limits for Mineral Oil Mist.
	STEL (mist), ACGIH	10.0 mg/m <sup>3</sup>	If used in a way that generates a "mist", observe the limits for Mineral Oil Mist.

## IX. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid
<b>Color:</b>	Water-white to straw yellow
<b>Odor</b>	Fainty, oily
<b>Boiling point:</b>	≥ 280°C (536°F) at STP
<b>Specific Gravity H<sub>2</sub>O = 1:</b>	0.90 at 25°C
<b>Solubility in water:</b>	< 5 ppm

**IX. PHYSICAL AND CHEMICAL PROPERTIES continued**

<b>Solubility in organic solvents:</b>	Soluble
<b>Vapor Density:</b>	Not established
<b>Flash Point COC (ASTM D92):</b>	≥ 200°C (390°F)
<b>Percent volatiles:</b>	nil
<b>Kinematic viscosity:</b>	Not determined

**X. STABILITY AND REACTIVITY****Stability**

Stable.

**Incompatible materials**

Normally unreactive; however avoid contact with strong oxidizing agents.

**Hazardous combustion products**

Burning can produce the following combustion products: oxides of carbon and soot.

**Hazardous polymerization**

Will not occur.

**XI. TOXICOLOGICAL INFORMATION****SWALLOWING****Acute effects**

See "Hazard Identification" and "First Aid" sections of this MSDS.

**Test Results**

<b>Acute toxicity:</b>	LD50 - Rat Result: > 2 g/kg Remark: Test results are based on analogy with a similar material.
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**SKIN ABSORPTION****Acute effects**

Harmful effects are not expected from short periods of contact.

**Effects of repeated overexposure**

Prolonged or repeated contact may lead to skin irritation by dermatitis or oil acne.

**INHALATION****Acute effects**

Inhalation of mist or spray may be harmful.

**Chronic effects**

Aspiration may cause pulmonary edema or aspiration pneumonia. Deposits in the lung may lead to fibrosis and reduced pulmonary function. Prolonged or repeated inhalation of excessive amounts of oil mist or vapors may cause irritation of the respiratory tract.

**SKIN CONTACT****Acute effects**

No evidence of permanent harmful effects from available information.

**XI. TOXICOLOGICAL INFORMATION continued****EYE CONTACT****Acute effects**

No evidence of permanent harmful effects from available information.

**SENSITIZATION**

**Test Results:** Species: Skin – Guinea pigs  
Result: Non-sensitizing

**CARCINOGENICITY****Assessment**

No evidence of carcinogenic activity.

**XII. ECOLOGICAL INFORMATION**

This product is toxic for aquatic life.

**XIII. DISPOSAL CONSIDERATIONS****General**

Incineration is the best means of disposal. Dispose of in accordance with appropriate Federal, State, and local regulations. If discarded in its purchased form, this material would not be considered at this time as a hazardous waste either by listing or by characteristics under Federal Hazardous Waste Regulations, 40 C.F.R. 261. Consult state and local regulations for proper disposal.

**XIV. TRANSPORT INFORMATION****DOT Classification**

This product is not regulated by DOT.

**Freight description road**

65 PETROLUEM OIL, N.O.I.B.N

**IMDG Classification**

This product is not regulated by IMDG.

**ICAO Classification**

This product is not regulated by ICAO.

**XV. REGULATORY INFORMATION****EPA Hazard Categories (SARA 311, 312)**

None

**U.S. Inventory (TSCA)**

Listed on inventory.

**XVI. OTHER INFORMATION****HMIS RATING**

Health: 1	Flammability: 1	Reactivity: 0	PPI: -
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**LEGEND**

STP	Standard temperature and pressure
W/W	Weight/Weight
0 (HMIS)	Minimal hazard
1 (HMIS)	Slight hazard
2 (HMIS)	Moderate hazard
3 (HMIS)	Serious hazard
4 (HMIS)	Severe hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions

WARNING: "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition; they may explode and cause injury or death. Do not attempt to clean since residue is difficult to remove and even a trace of remaining material constitutes as explosive hazard. "Empty" drums should be completely drained, properly banded, and promptly returned to a drum recycler. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

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