



MATERIAL SAFETY DATA SHEET

I. PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Radco Industries, Inc. , PO Box 305 LaFox, IL 60147 USA Emergency Phone: (630) 232-7966 Website: www.Xceltherm.com Product Name: XCEL THERM® 315 Heat Transfer Fluid Effective Date: 2/15/2007 Revision Date: 9/15/2010	Emergency Phone Numbers: 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

COMPONENT	CAS#	CONCENTRATION
Synthetic Alkylate (C ₁₄ -C ₃₀ alkyl deriv)	68855-24-3	100%

Note: Not a Hazardous Material for DOT shipping.

III. HEALTH HAZARD INFORMATION

POTENTIAL HEALTH EFFECTS

Ingestion

Single dose oral toxicity is low. The LD50 for rats is >5000mg/kg. Ingestion of large amounts may cause headache, vomiting, and diarrhea. If aspirated (liquid enters the lung), may cause chemical pneumonia, a condition caused by petroleum and petroleum-like solvents.

Skin Absorption

Short single exposure not likely to result in the material being absorbed through the skin in harmful amount. Prolonged exposure may cause skin irritation. The dermal LD50 for rabbits is believed to be >2000mg/kg

Inhalation

Excessive exposure may cause central and peripheral nervous system depression, with possible effects such as increase in frequency of respiration, headache, dizziness, lack of coordination, nausea, loss of appetite, and loss of consciousness.

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

Obtain medical attention. Oxygen may be given by qualified personnel if breathing is difficult or cyanosis (blue discoloration of skin) is noted. Give artificial respiration if not breathing. Remove to fresh air if aerosol spray is inhaled. Aspiration may cause pulmonary edema or aspiration pneumonia. Exposed persons should be kept under medical observation for at least 48 hours because delayed effects may occur.

Eye contact

Flush immediately with water for at least 15 minutes.



V. FIRE-FIGHTING MEASURES

Flash point: > 196 °C (385°F)**Autoignition Temperature:** > 330 °C (626°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**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****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 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 airborne mists.

Exposure limits

COMPONENT	TYPE	VALUE	REMARK
Mineral Oil Mist	TWA (mist), ACGIH	None Established	
	STEL (mist), ACGIH	None Established	

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, bright yellow liquid

Odor: Slight

Boiling point: $\geq 275^{\circ}\text{C}$ at STP

Flash point: $> 196^{\circ}\text{C}$ (385 $^{\circ}\text{F}$)

Kinematic viscosity (40 $^{\circ}\text{C}$): 20 cSt

Kinematic viscosity (100 $^{\circ}\text{C}$): 0.38 cSt

Percent volitiles: Nil

Specific gravity (H₂O =1): 0.876



IX. PHYSICAL AND CHEMICAL PROPERTIES continued

Solubility in organic solvents:	soluble
Solubility in water:	< 2 ppm @ 25°C
Vapor Density:	Not determined
Vapor pressure:	0.001 mmHg at 20°C

X. STABILITY AND REACTIVITY INFORMATION

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 "Health Hazard Information" and "First Aid Measures" sections of this MSDS.

Test Results

Acute toxicity: LD50 - Rat
 Result: > 7700 mg/kg
 Remark; Test results are based on analogy with a similar material.

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

This product is toxic for aquatic life.

XII. 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.

XIII. TRANSPORTATION INFORMATION

DOT Classification

This product is not regulated by DOT.

Freight description road

MIXED AROMATICS, N.O.I.B.N

IMDG Classification

This product is not regulated by IMDG.

ICAO Classification

This product is not regulated by ICAO.

XIV. REGULATORY INFORMATION

EPA Hazard Categories (SARA 311, 312)

None

TSCA Inventory

The ingredients of this product are on the TSCA inventory.

XV. OTHER INFORMATION

Recommended uses and restrictions

Please consult the product and/or application information bulletins for this product.

HMIS RATING

Health: 1	Flammability: 1	Reactivity: 0	PPI: -
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XVI. OTHER INFORMATION continued

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 bunged, 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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