



MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product NameXCEL THERM[®] CA HEAT TRANSFER FLUID**Company Identification**Radco Industries Inc.
PO BOX 305
LaFox, IL 60147Customer information number: 1-630-232-7966
Shipping emergency or off hour rush
orders number: 1-630-336-6728**EMERGENCY TELEPHONE NUMBER****Advisory Office in case of poisoning:**Chemtrec (North America): 1-800-424-9300
Chemtrec al(Internation): 1-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Emergency OverviewColor: Water-white to straw yellow liquid
Physical State: Liquid
Odor: Faint, oily**Potential Health Effects****Eye**

No significant health hazards identified.

Skin Contact

None expected for short term exposure. Prolonged contact may cause some irritation.

Skin Absorption

No significant health hazards identified.

Ingestion

No significant health hazards identified.

Inhalation

No significant health hazards identified.

This product has been evaluated and does not require any hazard warning label under the OSHA Hazard Communication Standard.

HMIS/NFPA Codes

Health: 1	Flammability: 1	Reactivity: 0	Special provisions: None
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SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	%Content	Symbol	R-phrases	CAS	EINECS, ELINCS
White mineral oil	100%	None	None	8042-47-5	232-455-8



SECTION 4. FIRST AID MEASURES

Eyes

Flush eyes with plenty of water.

Skin

No emergency care anticipated. Wash skin with soap and water. Remove contaminated clothing. Wash clothing before re-use. Obtain medical attention if irritation persists.

Ingestion

Do not induce vomiting. Treat symptomatically. Not expected to be toxic by ingestion.

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.

SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Small fires:

- Dry chemical
- Carbon dioxide

Large fires:

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

Special Exposure Hazards arising from the substance or preparation itself, combustion products, resulting gases

Incomplete burning can produce carbon monoxide and/or carbon dioxide and other harmful products.

Fire Fighting Equipment

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Small spills

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

Personal precautions

Wear protective clothing when taking up spill. Eliminate sources of ignition. Floor may be slippery; use care to avoid falling.

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.

**SECTION 7. HANDLING AND STORAGE****Handling**

Never use pressure to empty drums. Keep drums tightly closed to prevent contamination. Residual vapors may explode on ignition; do not puncture

Storage

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.

Keep away from strong oxidizing agents.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure guidelines**

Component	Type	Value
Product oil mist	ACGIH TLV	5 ppm
	STEL	10 ppm
	OSHA PEL	5 ppm

Eye protection

Face shield or chemical splash goggles in case of splashing.

Hand protection

Wear oil resistant gloves.

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.

Ventilation

Local ventilation is needed in the presence of airborne mists.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Water-white to straw yellow clear liquid
Odor:	none
Boiling point:	300 °C (572 °F)
Flash point (COC):	≥ 193 °C (380 °F)
Flammability (solid, gas):	Not available
Flammable limits:	LEL: Not available UEL: Not available
Kinematic viscosity (40 °C)	16.1 cSt
Partitioning coefficient:	Log POW: >6 This product is soluble in oil.
Vapor pressure at 20 °C:	< 0.0001 kg/cm ²
Specific gravity at 25 °C (H₂O = 1):	0.82 – 0.88

**SECTION 10. STABILITY AND REACTIVITY****Conditions to avoid**

None.

Hazardous decomposition products

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

Hazardous polymerization

Will not occur.

Materials to avoid

Normally unreactive; however avoid contact with:

- Strong oxidizing agents
- Sunlight or ultraviolet light
- Heat or high temperature

Stability

Stable

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity and immediate effects****Eye:**

A similar material produced a primary eye irritation score of 1.0/110; 24 hour (rabbit).

Ingestion, LD50 rat oral:

A similar material had a LD50 greater than 5g/kg.

Inhalation:

Minor changes have been reported in the lungs of animals exposed to mineral oil mist at a concentration of 100mg/m³ for two years. No changes have been detected in animals exposed to oil mist at a concentration of 5mg/m³ or 50mg/m³ for 2 years or 18 months respectively.

Skin absorption, LD50 dermal:

A similar material produced a primary dermal irritation score of 2.7/8.0. A similar material had a LD50 greater than 2g/kg and was not a skin sensitizer.

Delayed and chronic effects**Carcinogenicity:**

No component of this product is identified as a carcinogen by NTP, IARC or OSHA.

Inhalation:

Aspiration may cause pulmonary edema or aspiration pneumonia. Oil 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.

Mutagenicity (in-vitro):

Not available.

Narcosis:

Not available.

**SECTION 11. TOXICOLOGICAL INFORMATION continued****Reproductive toxicity:**

Not available.

Sensitization:

A similar material produced minimal skin irritation in humans (0.1/12) following five consecutive applications.

SECTION 12. ECOLOGICAL INFORMATION**Water Hazard Class (United States Department of Transportation)**

Not regulated

Persistence and degradability

Not available

Aquatic organism toxicity classification

The following data have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity. A legend summarizing the classification scheme appears below.

Toxic to invertebrates (48-hour EC50 Daphnia magna):	Not available
Harmful to warm water fish (96-hr LC50 Fathead minnow):	Not available
Toxic to coldwater fish (96-hr LC50 Rainbow trout):	Not available
Toxic to algae (96-hr EC50 Algae (chlorophyll)):	Not available

Legend for Aquatic Organism Toxicity (Journal of the European Communities, Annex VII A, Section 5.2.1)

Values	Classifications
LC50 or EC50 < or = 1.0 mg/L	Very Toxic
LC50 or EC50 > 1.0 mg/L and < or = 10 mg/L	Toxic
LC50 or EC50 > 10 mg/L and < or = 100 mg/L	Harmful
LC50 or EC50 > 100 mg/L	Practically Nontoxic

SECTION 13. DISPOSAL CONSIDERATIONS**Recommendation**

Dispose at a suitable refuse site, or at a suitable incineration plant.

Pay attention to official local and national regulations.**United States Department of Transportation classification**

Not regulated

SECTION 14. TRANSPORT INFORMATION**Transport by sea:**

IMDG-code: 60 (class)
EmS: Not available
Marine Pollutant: No

Transport by air

IATA: 60 (class)



SECTION 15. REGULATORY INFORMATION

United States Regulatory Information

California (Proposition 65)

This product does not contain any of the substances known to the State of California to cause cancer, birth defects, or reproductive harm.

CERCLA Reportable Quantity

This product is not reportable under 40 CFR Part 302.4.

DOT Proper Shipping Name

Not regulated.

OSHA Hazard Communication Standard

Listed by ACGIH.

RCRA Status

This product is not subject to the 40 CFR Part 268.30 land ban on the disposal of certain hazardous wastes.

SARA Status

This product is not regulated under SARA Title III, 42 USC 9601.

TSCA Status

All of the components of this product are listed on the TSCA inventory.

Volatile Organic Compounds (VOC)

This product has a 4.8%VOC content (EPA method 24).

International Inventories

Australia Inventory (AICS)

Listed on inventory.

Canada Inventory (DSL)

All the components of this product are listed on the DSL.

EC Inventory (EINECS/ELINCS)

In compliance.

Japan Inventory (MITI)

Listed on inventory.

Korea Inventory (ECL)

Listed on inventory.

Philippine Inventory (PICCS)

Listed on inventory.

Classification according to Dangerous Product Regulations incl. EC Directives (67/548/EEC and 1999/45/EC)

Symbols: None

Indications of danger: None

Harmful R-phrases: None

S-phrases: None

**SECTION 15. REGULATORY INFORMATION continued**

This substance is not listed in the Annex I of Regulation (EC) No 689/2008.

SECTION 16. OTHER INFORMATION

Product use: Heat transfer fluid

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.

Legend

CAS	Chemical Abstract Service Number
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
OSHA	Occupational Safety and Health Administration
STEL	Short-term exposure limit
TLV	Threshold limit value
TWA	Time weighted average

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