



XCELTHERM® 445FP

Safety Data Sheet

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Version: 8.0

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification

1.1. Identification

Trade name XCELTHERM® 445FP

1.2. Recommended use and restrictions on use

Use of the substance/mixture: High flash point of 445°F (229°C) that meets Coast Guard Marine requirements. A high flashpoint usually means higher viscosities and a sacrifice in efficiency. Xceltherm®445FP is an improved formulation with more efficient heat transfer for lower operating costs.

Use of the substance/mixture: Heat Transfer Fluids
Heat transfer agents

1.3. Supplier

Radco Industries Inc.
CAGE Code 6ZS16
700 Kingsland Drive
Batavia, Illinois 60510
United States
T (630) 232-7966
www.radcoind.com

1.4. Emergency telephone number

Emergency number: For Chemical Emergency Call CHEMTREC 24hr/day 7days/week
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-741-5970
(collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients**3.1. Substances**

Substance type UVCB
Name XCELTHERM® 445FP
CAS-No. 64742-54-7

Name	Product identifier	%	GHS US classification
Distillates (petroleum), hydrotreated heavy paraffinic*	CAS-No.: Trade Secret	100	Not classified

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures**4.1. Description of first aid measures**

First-aid measures general: Get medical advice/attention if you feel unwell.

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact: Gently wash with plenty of soap and water. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical advice/attention. Wash skin with plenty of water.

First-aid measures after eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists. Rinse eyes with water as a precaution.

First-aid measures after ingestion: Do not induce vomiting. Rinse mouth out with water. If you feel unwell, consult a doctor/medical service. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Practically non-toxic in symptoms: contact with skin (LD50 skin > 2000 mg/kg).

Symptoms/effects after inhalation: No effects known.

Symptoms/effects after skin contact: No effects known.

Symptoms/effects after eye contact: No effects known.

Symptoms/effects after ingestion: No effects known.

Chronic symptoms: No known effects from this product.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures**5.1. Suitable (and unsuitable) extinguishing media**

Suitable extinguishing media: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire: Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions: Evacuate area. Fight fire with normal precautions from a reasonable distance. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting: Self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment. Complete protective clothing.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

General measures: Warning! Product may cause floors to be slippery. Avoid contact with skin and eyes. Clean up any spills as soon as possible, using an absorbent material to collect it. Stop leak if safe to do so.

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment: Absorb spilled material with sand or earth.

Methods for cleaning up: Take up liquid spill into absorbent material. Absorb remaining liquid with sand or inert absorbent and remove to safe place.

Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Additional hazards when processed: Not expected to present a significant hazard under anticipated conditions of normal use.

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Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not discharge the waste into the drain.

Hygiene measures: Observe normal hygiene standards. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a dry place. Store in a closed container. Store in a well-ventilated place. Keep cool.

Incompatible products: Oxidizing agent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

XCELTHERM® 445FP (64742-54-7)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Mineral oil, excluding metal working fluids Pure, highly and severely refined
ACGIH OEL TWA	5 mg/m ³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Oil mist, mineral
OSHA PEL TWA [1]	5 mg/m ³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Distillates (petroleum), hydrotreated heavy paraffinic	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m ³ 8 Hours Form: inhalable
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	5 mg/m ³ 8 Hours
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	5 mg/m ³ 10 Hours. Form: mist
NIOSH REL STEL	10 mg/m ³ 15 minutes. Form: mist

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Appearance:	Water-white to pale yellow liquid.
Color:	White to light yellow
Odor:	Mixture contains one or more component(s) which have the following odour:
Odor threshold:	No data available
pH:	No data available
Melting point:	Not applicable
Freezing point:	No data available
Boiling point:	> 300 °C
Flash point:	229 °C (ASTM D92 Flash Point by Cleveland Open Cup)
Relative evaporation rate (butyl acetate=1):	No data available
Flammability:	Not applicable.
Vapor pressure:	< 0.1 hPa Temp.: 20 °C
Relative vapor density at 20°C:	No data available
Relative density:	0.86 (ASTM D1298 Relative Density at 15.6°C/15.6°C (60°F/60°F))
Solubility:	Insoluble in water.

Partition coefficient n-octanol/water (Log Pow):	3.9 – 6 Source: IUCLID
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, kinematic:	29.5 mm ² /s (ASTM D445 Kinematic Viscosity at 40°C)
Viscosity, dynamic:	No data available
Explosion limits:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity (oral):	Not classified
Acute toxicity (dermal):	Not classified
Acute toxicity (inhalation):	Not classified
Skin corrosion/irritation:	Not classified
Carcinogenicity:	Not classified.
Aspiration hazard:	Not classified
Viscosity, kinematic:	29.5 mm ² /s (ASTM D445 Kinematic Viscosity at 40°C)
Potential Adverse human health effects and symptoms:	Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg).
Symptoms/effects after inhalation:	No effects known.

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Symptoms/effects after skin contact:	No effects known.
Symptoms/effects after eye contact:	No effects known.
Symptoms/effects after ingestion:	No effects known.
Chronic symptoms:	No known effects from this product.
STOT-single exposure:	Not classified
STOT-repeated exposure:	Not classified
Reproductive toxicity:	Not classified

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LD50 oral rat:	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
LD50 dermal rabbit:	> 5000 mg/kg Source: IUCLID

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LD50 oral rat:	> 5000 mg/kg body weight (OECD 401 method)
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Distillates (petroleum), hydrotreated heavy paraffinic

Serious eye damage/irritation:	Not classified
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Distillates (petroleum), hydrotreated heavy paraffinic

Respiratory or skin sensitization:	Not classified
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Distillates (petroleum), hydrotreated heavy paraffinic

Germ cell mutagenicity:	Not classified
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LOAEL (oral,rat,90 days):	125 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
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Distillates (petroleum), hydrotreated heavy paraffinic

LOAEL (oral,rat,90 days):	125 mg/kg body weight male (OECD 408 method)
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general:	Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air:	None of the known components is included in the list of substances which may contribute to the greenhouse effect (IPCC). None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014).

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LC50 - Fish [1]:	> 5000 mg/l
EC50 - Crustacea [1]:	> 1000 mg/l Source: IUCLID

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water (Log Pow):	3.9 – 6 Source: IUCLID

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations**13.1. Disposal methods**

Waste treatment methods:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations:	Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.
Additional information:	Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA / ICAO / ADN / RID / ADG

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT):	Not applicable
Proper Shipping Name (TDG):	Not applicable
Proper Shipping Name (IMDG):	Not applicable
Proper Shipping Name (IATA):	Not applicable

14.3. Transport hazard class(es)**DOT**

Transport hazard class(es) (DOT): Not applicable

TDG

Transport hazard class(es) (TDG): Not applicable

IMDG

Transport hazard class(es) (IMDG): Not applicable

IATA

Transport hazard class(es) (IATA): Not applicable

14.4. Packing group

Packing group (DOT): Not applicable

Packing group (TDG): Not applicable

Packing group (IMDG): Not applicable

Packing group (IATA): Not applicable

14.5. Environmental hazards

Other information: No supplementary information available.

14.6. Special precautions for user**DOT**

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information**15.1. US Federal regulations**

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Distillates (petroleum), hydrotreated heavy paraffinic		Present	Active	

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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15.2. International regulations

CANADA

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Listed on the Canadian DSL (Domestic Substances List)

Distillates (petroleum), hydrotreated heavy paraffinic

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

XCELTHERM® 445FP (64742-54-7)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Distillates (petroleum), hydrotreated heavy paraffinic

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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