XCELTHERM® MARINE-S HEAT TRANSFER FLUID
SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name
XCELTHERM® MARINE-S HEAT TRANSFER FLUID

Recommended Use
Heat Transfer Fluid

Company Identification
Headquarters and Manufacturing Facility
Radco Industries, Inc.
700 Kingsland Drive
Batavia, IL 60510 USA

Manufacturing Facility
Radco Industries, Inc.
39W930 Midan Drive
LaFox, IL 60147

ISO 9001:2015 Certification Number: C2018-00035

Customer information number: 1-630-232-7966

EMERGENCY TELEPHONE NUMBER
Advisory Office in case of poisoning: Chemtrec
Chemtrec (North America): 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification of mixture: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Acute Toxicity by inhalation – Category 4
Aspiration Hazard, Category 1

Hazard Pictogram:

Signal Word: Danger

Hazard Statements:

H304:	May be fatal if swallowed and enters airways.

Precautionary Statements:

P260:	Do not breathe fumes, mist, vapor, or spray
P285:	In case of inadequate ventilation wear respiratory protection
P301 + P315 +P331 P338:	IF SWALLOWED: Do NOT induce vomiting. Get immediate medical advice/attention.
P303 + P350:	I ON SKIN OR HAIR: Gently wash with soap and water.

P304: P314 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention.
P305 + P351:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P362:	Take off contaminated clothing and wash before reuse.
P405:	Store locked up.
P501:	Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	%Composition	CAS Number
Trade secret	Proprietary	Proprietary

4. FIRST-AID MEASURES

Eye Contact
Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.

Skin Contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation
Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.

Ingestion
Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
For small fires use carbon dioxide, dry chemical or foam.
For large fires use alcohol-type foam, universal type foam or water fog.

Unsuitable Extinguishing Media
Do not use water jet. Water may displace and spread fire.

Fire-Fighting Equipment
Firefighter should wear normal protective equipment (full bunker gear) and positive-pressure contained breathing apparatus. Water can be used to cool fire-exposed containers, to protect personnel and to disperse vapors and spills. Water runoff can cause environmental damage. Dike and collect water used to fight fires.

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.

6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING AND STORAGE

Handling
Do not breathe vapors/dust. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

Storage
Do not store in open or unlabeled containers. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Oil mist or vapor:
ACGIH TLV: 5 mg/m^3
OSHA PEL: 5 mg/m^3

Respiratory Protection
Use with adequate ventilation. Avoid breathing vapor. If heated and ventilation is inadequate, use NIOSH certified respirator, which will protect against organic vapor.

Hand Protection
Wear clothing and gloves that cannot be penetrated by chemicals or oil.

Eye Protection
Safety glasses, chemical goggles, or face shields recommended to prevent contact.

Other Protection
Do not eat, drink, or smoke when handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

"PHYSICAL AND CHEMICAL PROPERTIES" DATA REPRESENTS TYPICAL LABORATORY SAMPLES, AND ARE NOT GUARANTEED FOR ALL SAMPLES.

Appearance:	Colorless, to pale yellow liquid
Odor:	None.
Odor threshold:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Evaporation Rate:	Not available.
Flash point Cleveland Open Cup (ASTM D92):	>221°C (430°F)
Flash point Pensky-Martens (ASTM D93):	>198°C (389°F)
Flammability (solid, gas):	Non-flammable
Lower flammability limit:	Not determined
Upper flammability limit:	Not determined
Initial boiling point and boiling range:	Not determined
Melting point/freezing point:	Not applicable
Partition coefficient (n-octanol/water), Log P_{ow}:	Not determined
pH:	Not applicable
Solubility in water:	< 300 ppm
Relative density (ASTM D1298) 25°C/25°C (77°C/77°C):	0.84

Vapor density:	Not available
Vapor pressure:	>0.01 mmHg at 20°C (68°F)
Viscosity (ASTM D445):	28 - 32 cSt at 40°C (104°F)

10. STABILITY AND REACTIVITY INFORMATION

Materials to avoid
Exposure to materials which are highly oxidizing should be avoided.

Hazardous polymerization
Does not occur.

Hazardous decomposition products
Incomplete combustion may give various cracked and oxidized hydrocarbons.

Stability
Stable

11. TOXICOLOGICAL INFORMATION

Acute Toxicity based on components
Oral, LD50 rat: > 5,000 mg/kg

Chronic Toxicity
Data not available.

Carcinogenicity
No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC) or the European Commission (EC).

Mutagenicity
No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen.

Teratogenicity
No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic

Reproductive Toxicity
No known significant effects or critical hazards.

12. ECOLOGICAL CONSIDERATIONS

Toxicity based on components
EL50 Daphnia, 48 hours: > 1,000 mg/L
LL50 fish, 96 hours: > 1,000 mg/L

Biodegradability of polyalphaolefin
Not readily biodegradable.

Bioaccumulation of polyalphaolefin
High potential of bioaccumulation in the environment.
$LogP_{ow} > 6.5$

Mobility
This product has low solubility in water, and is not likely to move rapidly with surface or groundwater flows.

13. DISPOSAL INFORMATION

Disposal must be in accordance with applicable federal, state, or local regulations.

Do not allow product to reach ground water, water course, or sewage systems.

This unused material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it could be considered hazardous if it meets criteria for being toxic, corrosive, ignitable, or reactive according to U.S. EPA definitions (40 CFR Subpart C). This material could also become hazardous waste if it is mixed with or comes into contact with a listed hazardous waste. If it is a hazardous waste, regulations in 40 CFR 262-266, 268, 270, and 279 may apply.

"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.

14. TRANSPORT INFORMATION

U.S. Dept. of Transportation Shipping Name
Not regulated.

Canadian Transportation of Dangerous Goods Shipping Name
Not regulated.

European Rail/Road (ADR/RID) Shipping Name
Not regulated.

Air (ICAO/IATA) Shipping Name
Not regulated.

Sea (IMO/IMDG)
Not regulated.

15. 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.

Environmental Protection Agency
None of the ingredients are listed

National Toxicology Program (NTP)
None of the ingredients are listed.

OSHA Hazard Communication Standard
Not hazardous per 29 CFR 1910.1200(d).

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355)
This product is not regulated under Section 302 of SARA and 40 CFR Part 355.

SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370)
Hazardous categories for this product are: Acute= no; Chronic= no; Fire=no; Pressure=no; Reactive=no.

SARA Title III Section 313 (40 CFR Part 372)
This product is not regulated under Section 313 of SARA and 40 CFR Part 372.

U.S. Inventory (TSCA)
Listed on inventory.

Australia Inventory (AICS)
Listed on inventory.

Canada Inventory (DSL)
All of the ingredients are listed.

China (CICS)
None of the ingredients are listed.

International Agency for Research on Cancer (IARC)
None of the ingredients are listed.

Japan Inventory (MITI)
Listed on inventory.

Korea Inventory (ECL)
Listed on inventory.

16. OTHER INFORMATION

Safety Data Sheet Creation Date: 17 May 2015
Safety Data Sheet Revision Date: 8 March 2018

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