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SAFETY DATA SHEET

Heat Transfer Fluid

1. Identification

Product name: Heat Transfer Fluid

Product Code: 99-HTF, 99-HTFQ

Recommended use: Heat Transfer in machines.

Restrictions on use: Only use in recommended manner.

Manufacturer information:

Optisource

40 Sawgrass Drive

Bellport, NY 11713

631-924-8360

Emergency phone +1-703-527-3887

2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the product: Not classified

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements :

Avoid ingestion, inhalation, skin and eye contact. Handle in accordance with good industrial hygiene practice and any legal requirements.

3. Composition/information on ingredients

Substance/mixture : Substance

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards. Over-exposure signs/symptoms

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

5. Fire-fighting measures

Flash point : Closed cup: 109°C (228.2°F) [DIN 51758 EN 22719 (Pensky-Martens Closed Cup)] Flammable limits : Lower: 2.6%

Upper: 12.5%

Suitable extinguishing media Use extinguishing agent appropriate for surrounding fire

Unsuitable extinguishing media None Known

Special protective equipment for fire-fighters: Promptly isolate the scene by removing all persons from vicinity of incident if there is a fire. Always use NIOSH approved self-contained breathing apparatus as well as full fire equipment if necessary

Specific hazards arising from the chemical: If heated pressure will increase and container may burst.

Hazardous thermal decomposition products: carbon dioxide carbon monoxide

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency : personnel : Promptly isolate the scene by removing all persons from the vicinity of the incident. If there is a fire. No action shall be taken involving any personal risk or without suitable training. :

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non- combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Always dispose of in accordance with local, state and federal regulations.

7. Handling and storage

Precautions for safe handling

Protective measures : Advice on general occupational hygiene

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store between the following temperatures: 18 to 32°C (64.4 to 89.6°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

8. Exposure controls/personal protection

No PEL set by OSHA

Control parameters

Appropriate engineering No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure: Emissions from ventilation or work process equipment should be checked to ensure controls they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures :Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection :Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: Goggles.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection :Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection :Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Respiratory protection.

9. Physical and chemical properties

Appearance liquid

Odor odorless

Odor threshold not available

Ph 7

Melting/freezing point -60 C

Boiling point and boiling range 188 C

Flash point Closed cup 109 C

Evaporation rate .01

Flammability not avail

Flammability limits lower: 2.6% upper 1235%

Vapor pressure .019 KPA

Vapor density 2.6

Relative density 1.04

Solubility easily soluble

Partition coefficient: n-octanol/water -.92

Auto-ignition temperature 371C

Decomposition temperature not available

Viscosity dynamic 46 mPa

10. Stability and reactivity

Reactivity : No data available, expected to be stable under normal conditions

Chemical stability :

No specific test data related to reactivity available for this product or its ingredients.

The product is stable.

Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name Test Endpoint Species Result - LD50 Dermal Rabbit 21000 mg/kg

- LD50 Oral Rat 22000 to 31000

mg/kg

Irritation/Corrosion

Not available.

Sensitization

Product/ingredient name Test Route of exposure Species - skin Guinea pig Not sensitizing

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Potential acute health effects

Eye contact: No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact: No known significant effects or critical hazards. Ingestion

No known significant effects or critical hazards. Symptoms related to the physical, chemical and toxicological characteristics

Potential delayed effects: no data available

12. Ecological information

Toxicity

Product/ingredient name Test Endpoint Exposure Species Result - Acute EC50 72 hours Algae 19000 mg/l -

Acute EC50 72 hours Algae >100 mg/l - Acute EC50 48 hours Daphnia 18340 mg/l - Acute EC50 48 hours

Daphnia 34400 mg/l - Acute LC50 96 hours Fish 40.613 mg/l - Acute LC50 96 hours Fish 23800 mg/l -

Acute LC50 96 hours Fish 51400 mg/l - Acute LC50 24 hours Fish >5000 mg/l - Acute LC50 96 hours Fish

>100 mg/l - Chronic NOEC 18 hours Bacteria 20000 mg/l

Persistence and degradability

Product/ingredient name Test Period Result

28 days >60 %

Conclusion/Summary : Readily biodegradable

Readily biodegradable

Product/ingredient name Aquatic half-life Photolysis Biodegradability Readily

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible.

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and non- recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty

containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

13. Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. Transport Information

Proper shipping name

DOT : Not regulated.

Not regulated. IMDG :

Not regulated. IATA :

Not regulated.

United States Regulations

Clean Air Act - Ozone This product does not contain nor is it manufactured with ozone depleting substances. Depleting Substances (ODS)

Regulatory information

DOT Classification

Not regulated.

TDG Classification -

PG: Packing group

Not regulated.

IMDG Classification Not regulated.

IATA Classification Not Regulated

15. Regulatory information

PENNSYLVANIA - RTK

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canadian regulations CEPA DSL : This material is listed or exempted. WHMIS Classes : Not controlled under WHMIS (Canada).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations Classification system

Hazardous Material Information System (U.S.A.)

The customer is responsible for determining the PPE code for this material.

Health

0

Flammability

1

Physical hazards

0

Personal protection X

Section 16. Other information

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