

Dynalene HC-FG (heat transfer fluid)

1. Product and Company Identification

1.1 Product identifiers

Product Name: Dynalene HC-FG (includes all concentrations)
Producer: Dynalene, Inc.
Product Number: Not available.
CAS-No.: Not available.

1.2 Identified uses of the product and uses advised against

Identified Uses: Heat transfer fluid.

1.3 Details of the chemical supplier

Company: Dynalene, Inc.
5250 West Coplay Road
Whitehall, PA 18052
USA
Telephone: +1 610-262-9686
Fax: +1 610-262-7437

1.4 Emergency telephone number

Within the U.S.: +1 800-424-9300 (CHEMTREC)
Outside the U.S.: +1 703-527-3887 (CHEMTREC)

2. Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Serious eye damage/eye irritation (Category 2A), H319

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)
H319 Causes serious eye irritation.

Precautionary statement(s)
Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None.

3. Composition/Information on Ingredients

3.1 Product mixture

Synonyms: Mixture.
Molecular Wt: Not available.

CAS-No.: Not available.

Ingredients	Classification	CAS No.	Concentration
Potassium formate	Serious eye irritation 2A; H319	590-29-4	25 – 75%
Deionized water	Not hazardous	7732-18-5	25 – 75%
Inhibitor solution (trade secret)	Not hazardous	N/A	<10%

4. First Aid Measures

4.1 Description of first aid measures

Skin exposure

Wash off with soap and water. Consult a physician.

Eye exposure

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water and consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

5. Fire Fighting Measures

5.1 Suitable (and unsuitable) extinguishing media

Suitable: Water spray, carbon dioxide, foam, dry chemical, any ABC class.

5.2 Specific hazards arising from the chemical

When involved in a fire, this material may decompose and produce irritating vapors and toxic gases (e.g., carbon oxides).

5.3 Advice for firefighters

Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move fire-exposed containers if it can be done without risk to firefighters. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmental areas.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

Proper protective equipment should be used. In case of an uncontrolled release, clear the affected area, protect people, and respond with trained personnel. Avoid breathing vapors. Ensure adequate ventilation.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Small spill: Cover with absorbent material (floor absorbent, vermiculite, etc.). Soak up spill and place material into a drum.

Large spill: Wear protective equipment. Stop spill at source, dike the area surrounding the spill to prevent further exposure. Prevent material from entering sewer system. If necessary, absorbents such as vermiculite, clay floor absorbent may be used on spill and shoveled into drums.

6.4 References to other sections

For disposal see section 13.

7. Handling and Storage

7.1 General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the day.

7.2 Precautions for safe handling

Use in a well-ventilated location. Open drums and other containers of this product slowly, on a stable surface. Drums and other containers of this product should be properly labeled. Keep containers tightly closed.

7.3 Conditions for safe storage, including any incompatibilities

Move drums of this product carefully, with the appropriate drum-handling equipment. Store drums and other containers in cool, dry locations, away from direct sunlight, or sources of intense heat. Storage areas should be made of fire-resistant materials. Keep containers away from incompatible chemicals.

8. Exposure Controls/Personal Protection

8.1 Control and exposure limits recommended by the chemical manufacturer

Contains no substances with occupational exposure limit values.

8.2 Appropriate engineering controls

Use with adequate ventilation to minimize exposure to mists or sprays of this product. Prudent practice is to ensure eyewash/safety shower stations are available near areas where this product is used. Monitoring of oxygen level is recommended.

8.3 Individual protection measures, such as personal protective equipment

All personnel handling the product should use a personal protective equipment level D.

Respiratory protection

None needed for normal circumstances of use. If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown.

Eye protection

Wear safety glasses with side shields.

Hand protection

Wear butyl rubber, natural rubber, neoprene, Nitrile rubber, or other suitable gloves for routine industrial use.

Body protection

Wear impervious clothing.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

- | | |
|-------------------|-----------------------------|
| a) Appearance | Clear/light yellow, liquid. |
| b) Odor | Odorless. |
| c) Odor threshold | No data available. |

d) pH	7.0 - 11.0
e) Melting/freezing point	<0°C (<32°F)
f) Boiling point	>100°C (>212°F)
g) Flash point	Not applicable.
h) Evaporation rate	No data available.
i) Flammability (solid, gas)	No data available.
j) Upper/lower flammability or explosive limits	Upper (UEL): No data available. Lower (LEL): No data available.
k) Vapor pressure	No data available.
l) Vapor density	No data available.
m) Relative density	>1.0 g/cm ³ at 25°C (77°F)
n) Water solubility	Soluble.
o) Partition coefficient: n-octanol/water	No data available.
p) Auto-ignition temp	Not applicable.
q) Decomposition temp	No data available.
r) Viscosity	>1.0 cP at 25°C (77°F)

10. Stability and Reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under ordinary conditions of use and storage.

10.3 Possibility of hazardous reactions

Stable under ordinary conditions of use and storage.

10.4 Conditions to avoid

Contact with incompatible chemicals and exposure to extremely high temperatures.

10.5 Incompatible materials

Strong oxidizers, strong acids, acid chlorides, acid anhydrides, chloroformates, or strong reducing agents.

10.6 Hazardous decomposition products

No data available.

11. Toxicological Information

11.1 Information on toxicological effects

For potassium formate

LD50 Oral – mouse: 5,500 mg/kg

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Suspected cancer agent

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH, NTP, OSHA, or IARC.

Irritancy of product

This product may cause irritation to contaminated tissues.

Reproductive toxicity

This product is not reported to produce mutagenic, embryotoxic, teratogenic, or reproductive effects in humans.

12. Ecological Information**12.1 Ecotoxicity (aquatic and terrestrial)****Marine**

For potassium formate:

Juvenile turbot (<i>Scophthalmus maximus</i>):	LC50 (96 hr) - 1700 mg/l
Marine algae (<i>Skeletonema costatum</i>):	EbC50 (72 hr) - 3400 mg/l
Marine copepod (<i>Acartia tonsa</i>):	LC50 (48 hr) - 300 mg/l
Brown shrimp (<i>Crangon crangon</i>):	LC50 (96 hr) - 1300 mg/l

Freshwater

For potassium formate:

Rainbow trout (<i>Oncorhynchus mykiss</i>):	LC50 (96 hr) - 3500 mg/l
Freshwater algae (<i>Scenedesmus subspicatus</i>):	EbC50 (72 hr) - 1000 mg/l
Water flea (<i>Daphnia magna</i>):	EC50 (48 hr) - 540 mg/l

12.2 Persistence and degradability

For potassium formate:

Bioaccumulation:	Log Pow = <0 (no potential to bioconcentrate). See also Section 9.
Persistence / Degradability:	Readily biodegradable. (Method: OECD 301D and 301E). BOD ₂₈ [mg O ₂ /L]: 3.15 (Potassium formate 18 mg/L) ThOD [mg O ₂ /L]: 3.42 (Potassium formate 18 mg/L) Percent Biodegradation (28 days): 92% (Potassium formate 18 mg/L) BOD ₅ [mg/g] (sample 50 mg/L): 8 (Potassium formate 18 mg/L) COD [mg/L=mg/g] (sample 1,000 mg/L): 93 (Potassium formate 18 mg/L)

12.3 Mobility in soil

For potassium formate:

Mobility: Highly soluble in water - Water solubility > 1200 g/L at 20°C.

13. Disposal Considerations**13.1 Waste treatment methods**

Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

14. Transport Information**DOT**

Not dangerous goods.

IMDG

Not dangerous goods.

IATA

Not dangerous goods.

15. Regulatory Information

SARA 302	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302 (Extremely Hazardous Substances).
SARA 313	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313 (Toxics Release Inventory Chemicals).
SARA 311/312	(Emergency Planning and Community Right-to-Know Act): No SARA Hazards
Massachusetts Right To Know	No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know	No components are subject to the Pennsylvania Right to Know Act
New Jersey Right To Know	No components are subject to the New Jersey Right to Know Act.
TSCA	All components are on the Toxic Substance Control Act Inventory.
EINECS	All components are on the European Inventory of Existing Commercial Chemical Substances.
California Prop 65	This product does not contain ingredients that cause cancer or reproductive harm known to the state of California.
Canada DSL	All components of this product are on the Canadian Domestic Substance List.

16. Other Information

Revision Date
27 March 2020

This SDS was prepared by Dynalene, Inc.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Dynalene Heat Transfer Fluids assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Dynalene Heat Transfer Fluids assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.