Dynalene HC (heat transfer fluid)

1. Product and Company Identification

1.1 Product identifiers
Product Name: Dynalene HC (includes all concentrations/dyes)
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.

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

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/cm³ at 25°C (77°F)  

n) Water solubility  Soluble.  

o) Partition coefficient: n-octanol/water  <0 (no potential to bioconcentrate)  

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

**Freshwater**
For potassium formate:
- Rainbow trout (Oncorhynchus mykiss): LC50 (96 hr) - 3500 mg/l
- Freshwater algae (Scenedesmus subspicatus): EbC50 (72 hr) - 1000 mg/l
- Water flea (Daphnia magna): 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.
  - BOD5 [mg O2/L]: 3.15 (Potassium formate 18 mg/L)
  - ThOD [mg O2/L]: 3.42 (Potassium formate 18 mg/L)
- Percent Biodegradation (28 days): 92% (Potassium formate 18 mg/L)
  - BOD5 [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.