**Dynalene FC-Bio**

1. **Product and Company Identification**

1.1 **Product identifiers**
   
   - **Product Name:** Dynalene FC-Bio
   - **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.
   - **Address:** 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 **GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**
   
   Not a hazardous substance or mixture.

2.2 **GHS Label elements, including precautionary statements**
   
   Not a hazardous substance or mixture.

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>1,3-propanediol</td>
<td>Not hazardous.</td>
<td>504-63-2</td>
<td>50 – 80%</td>
</tr>
<tr>
<td>Deionized water</td>
<td>Not hazardous</td>
<td>7732-18-5</td>
<td>20 – 50%</td>
</tr>
<tr>
<td>Inhibitor solution</td>
<td>Not hazardous.</td>
<td>n/a</td>
<td>&lt;12%</td>
</tr>
<tr>
<td>(trade secret)</td>
<td></td>
<td></td>
<td></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, liquid.
b) Odor Odorless.
c) Odor threshold No data available.
d) pH 5.0 - 7.0
e) Melting/freezing point < -27°C (< -17°F)
f) Boiling point > 100°C (> 212°F)
g) Flash point None.
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 0.08 mmHg at 25°C (77°F)
l) Vapor density No data available.
m) Relative density  1.0 – 1.2 g/cm³ at 25°C (77°F)
n) Water solubility  Soluble.
o) Partition coefficient: n-octanol/water  No data available.
p) Auto-ignition temp  No data available.
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
Mainly carbon dioxide and carbon monoxide.

11. Toxicological Information

11.1 Information on toxicological effects
For propane-1,3-diol
LD50 Oral – mouse:  4,500 mg/kg

Skin corrosion/irritation
Skin – human; Result: mild skin irritation, 48h.

Serious eye damage/eye irritation
No data available.

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.

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.
Medical conditions aggravated by exposure
It is anticipated that mainly skin, eye, and respiratory disorders may be aggravated after over-exposure.

Additional information
Not available.

12. Ecological Information

12.1 Ecotoxicity (aquatic and terrestrial)
This product may be harmful to aquatic life if large quantities are released into bodies of water.

Propane-1,3-diol
Toxicity to fish: LC50 – Carassius auratus (goldfish) - >5,000 mg/L, 24h.
Toxicity to invertebrates: EC50 – Daphnia magna (water flea) – 7,417 mg/L, 48h.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulation potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Other adverse effects
None.

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

UN Number: Not available.
UN Proper Shipping Name: Not available.
Class: Not available.
Packing Group: Not available.

DOT / IMDG / 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.
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.
SARA 311/312 No SARA hazards.
Massachusetts Right To Know  
Pennsylvania Right To Know  
New Jersey Right To Know  

No components are subject to the Massachusetts Right to Know Act.
No components are subject to the Pennsylvania Right to Know Act.
No components are subject to the New Jersey Right to Know Act.

TSCA  

All components of this product are on the Toxic Substance Control Act Inventory.

EINECS  

All components of this product 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  
3 July 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.