

## SAFETY DATA SHEET

### 1. IDENTIFICATION

Product identifier used on the label

: **Flottec F145 Frother**

Recommended use of the chemical and restrictions on use

: Flotation chemical used in mining industry

Chemical family

: Alcohols, aliphatic, ether, and diols

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

**Flottec, LLC**

338 West Main Street  
Boonton, NJ 07005 U.S.A.  
www.flottec.com

Information Telephone # : (973) 588 4717

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.)

### 2. HAZARDS IDENTIFICATION

Classification of the chemical

Skin and Eye Irritant (Category 2)

Long-term hazard to the aquatic environment (Category 3)

Label elements

**Signal Word**

Warning

**Hazard statement(s)**

H315: Causes skin irritation

H319: Causes serious eye irritation

H412: Harmful to aquatic life with long lasting effects.

**Precautionary statement(s)**

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves, eye and face protection.

P302+P352 IF ON SKIN: Wash with plenty of water or use emergency shower.

P332+P313 If skin irritation occurs: Get medical attention.

P362+P364 Take off contaminated clothing and wash it before reusing.

P305+PP351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.

P337+P313 If eye irritation persists: Get medical attention.

**Hazard pictogram(s)**



**Other hazards**

Acute hazard to the aquatic environment (Category 3).

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Common name	CAS #	Concentration / wt %
High boiling by-products from the manufacturing process of 2-ethylhexanol	68609-68-7	100

### 4. FIRST-AID MEASURES

#### Description of first aid measures

- Ingestion* : Do not induce vomiting. Never give anything by mouth to a person who is unconscious or is having convulsions. Call a physician.
- Inhalation* : IF INHALED: Remove person to fresh air and keep comfortable for breathing. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Call a POISON CENTER or doctor/physician if you feel unwell.
- Skin Contact* : IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- Eye Contact* : IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Symptoms** : May cause serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause mild skin irritation. Prolonged or repeated skin contact may cause drying and irritation.

**Notes to the physician** : Treat according to person's condition and specifics of exposure. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing media

*Suitable extinguishing media* : Dried powder, water spray, carbon dioxide (CO<sub>2</sub>), chemical foam.

*Unsuitable extinguishing media* : Do not use direct water jet.

#### Special hazards arising from the substance or mixture

: May be combustible at high temperature.

#### Special protective equipment and precautions for firefighters

*Protective equipment for fire-fighters* : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

*Special fire-fighting procedures* : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from firefighting to enter drains or water courses. Dike for water control.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

: Keep people away from and upwind from spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment. Refer to protective measures listed in sections 7 and 8.

**Environmental precautions** : Prevent product from entering drains, sewers, waterways and soil. For a large spillage, consult the Department of Environment or the relevant authorities.

#### Methods and material for containment and cleaning up

: Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools and equipment in the clean-up process. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable

containers. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities. Refer to Section 13 for disposal of contaminated material.

## 7. HANDLING AND STORAGE

- Precautions for safe handling** : Use only outdoors or in a well-ventilated area. Wear suitable protective equipment during handling. Wear protective gloves and eye/face protection. Avoid contact with skin, eyes and clothing. Empty containers retain residue (liquid and/or vapor) and can be dangerous.
- Conditions for safe storage** : Store in cool/well-ventilated place. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.
- Storage temperature** : 15 to 30 °C (59 to 86 °F)

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Immediately Dangerous to Life or Health

- : No IDLH value reported.

### Exposure controls

- Appropriate engineering controls** : Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapors, mists, aerosols or dust below their respective occupational exposure limits.
- Respiratory protection** : Respiratory protection is not required in normal use. Respiratory protection equipment (PPE) must be selected, fitted, maintained and inspected in accordance with regulations and CSA Standard Z 94.4 and approved by NIOSH / MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times the exposure limit: wear a half mask respirator with appropriate cartridges fitted with P100 filters. For an APF until maximum 100 times of exposure limit, wear a full face respirator mask with appropriate cartridges and P100 filters.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. If necessary, wear an apron or long-sleeve protective coverall suit.
- Eye / face protection** : Wear chemical splash goggles. If risk of contact with eyes or the face, wear a face shield.
- Hands** : Chemical-resistant, impervious gloves should be worn at all times when handling this chemical product. Wear nitrile or neoprene gloves. Before using, user should confirm impermeability. Discard gloves that show tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly
- Other protective equipment** : Wear safety shoes. Wear rubber boots to clean up a spill.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	: Liquid	<b>Flammability limits (% by vol.)</b>	: N/Av
<b>Color</b>	: Light yellow to dark straw	<b>Flash point</b>	: 95°C (203°F)
<b>Odor</b>	: Alcohol/aldehyde	<b>Auto-ignition temperature</b>	: > 187°C (370 °F)
<b>Odor threshold</b>	: N/Av	<b>Sensibility to electrostatic charge</b>	: N/Av
<b>pH</b>	: 7	<b>Sensibility to sparks/friction</b>	: N/Av
<b>Melting/Freezing point</b>	: <-90 °C (-130 °F)	<b>Vapor density (Air = 1)</b>	: N/Av
<b>Boiling point/range</b>	: >209 °C (408 °F)	<b>Relative density (Water = 1)</b>	: 0.91 kg/L @ 25°C (77°F)
<b>Solubility in water</b>	: Insoluble	<b>Partition coefficient (n-octanol/water)</b>	
<b>Evaporation rate (BuAc = 1)</b>	: N/Av		: N/Av
<b>Vapor pressure</b>	: 0.1 – 2 hPa @ @ 25°C (77°F)	<b>Decomposition temperature</b>	: N/Av
<b>Volatiles (% by weight)</b>	: N/Av	<b>Viscosity</b>	: N/Av
<b>Flammability (solid, gas)</b>	: N/Av	<b>Molecular mass</b>	: N/Av

## 10. STABILITY AND REACTIVITY

- Reactivity** : None known
- Chemical stability** : Stable under recommended storage conditions.
- Possibility of hazardous reactions (including polymerizations)** : Hazardous polymerization will not occur.

- Conditions to avoid** : Avoid contact with incompatible materials.  
**Incompatible materials** : Oxidizing agents, alkali or alkaline-earth metals.  
**Hazardous decomposition products** : Carbon monoxide; oxides of nitrogen.

## 11. TOXICOLOGICAL INFORMATION

### Toxicological data

Chemical name	LC <sub>50</sub> (Inhalation, rat)	LD <sub>50</sub> / mg/kg	
		(Oral, rat)	(Dermal, rabbit)
High boiling by-products from the manufacturing process of 2-ethylhexanol	> 5.4 mg/L (aerosol)	> 5000	> 2000

### Likely routes of exposure

- Skin** : Yes  
**Eye** : Yes  
**Inhalation** : Yes  
**Ingestion** : Yes

### Potential Health Effects:

#### Signs and symptoms of delayed, immediate and chronic effects

- Skin** : May cause skin irritation.  
**Eye** : May cause severe eye irritation.  
**Inhalation** : Mist exposure can cause irritation to nose, throat and lungs.  
**Ingestion** : Not expected to have any effect.  
**Sensitization to material** : Ingredients present at levels greater than or equal to 0.1% of this product are not skin or respiratory sensitizers.  
**IRAC/NTP Classification** : No ingredients listed  
**Carcinogenicity** : Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.  
**Mutagenicity** : Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effect.  
**Reproductive Effects** : Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause reproductive effect.  
**Specific target organ effects – single exposure** : No target organ is listed.  
**Specific target organ effects – repeated exposure** : No target organ is listed

## 12. ECOLOGICAL INFORMATION

- Ecotoxicity** :
- Fish - Branchydanio Renio - fresh water LC<sub>50</sub> 50 mg/L; 96h (CAS no 68609-68-7) OECD 203
  - Invertebrate - Daphnia magna LC<sub>50</sub> >38 mg/L; 48h (CAS no 68609-68-7) OECD 202
  - Algae, Desmodesmus subspicatus EC<sub>50</sub> 35 mg/L; 72h (CAS no 68609-68-7) OECD 201
- Persistence and degradability** : All tests in water showed that High boiling by-products from the manufacturing process of 2-ethylhexanol (CAS no 68609-68-7) was not ready biodegradable under the test conditions within 28 days (OECD Guideline 301). However, the BOD5/COD ratio of 85% at day 14 confirms the suitability degradation in the activated sludge.
- Bioaccumulation potential** : High boiling by-products from the manufacturing process of 2-ethylhexanol (CAS no 68609-68-7) has a partition factors Log Kow of 1.6 indicating it shouldn't accumulate in the food chain.
- Mobility in soil** : High boiling by-products from the manufacturing process of 2-ethylhexanol (CAS no 68609-68-7) has low volatility and low soluble in water. Then product should migrate towards the soil.
- Other adverse environmental effects** : This chemical does not deplete the ozone layer.

**13. DISPOSAL CONSIDERATIONS**

**Handling for Disposal** : Important! Prevent waste generation. Use in full. DO NOT throw residual to sewer, streams, sewers or drinking water supply. DO NOT puncture, cut, heat or burn container, even after use. Return empty container properly labeled to supplier or everywhere there is a recovery program. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.

**14. TRANSPORTATION INFORMATION**

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
DOT	Not regulated				
<b>Additional Information</b>					
TDG	Not regulated				
<b>Additional Information</b>					
IMO/IMDG	Not regulated				
<b>Additional Information</b>					
IATA	Not regulated				
<b>Additional Information</b>					

**15 - REGULATORY INFORMATION**

**US Federal Information:**

- Toxic Substance Control Act (TSCA) :  
 All ingredients are listed in the TSCA Inventory or otherwise comply with TSCA requirements.
- CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):  
 High boiling by-products from the manufacturing process of 2-ethylhexanol (CAS no 68609-68-7).

**Canadian Information:**

- Canada DSL and NDSL:  
 All ingredients are listed in the Domestic Substances List (DSL)
- Canadian National Pollutant Release Inventory Substances (NPRI):  
 No material is listed.

**NFPA**



**16. OTHER INFORMATION**

**Other special considerations for handling** : Provide adequate information, instruction and training for operators.

**Prepared by:** Flottec, LLC

**Revised by:** C. Yuen

**REASON FOR REVISION:** corrected format in section 12

**DISCLAIMER**

The above information is believed to be accurate and represents the best information currently available to us. However, we make no warrantee of merchantability or any other warrant, expressed or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular uses.

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