

# Safety Data Sheet (SDS)

## Section 1: Identification

**Product identifier:** Barker's Reagent

**Other name(s):** None

**Item number(s):** 169

**Identified use:** SU24 Scientific research and development.

**Details of the supplier of the safety data sheet:**

ES Laboratory, LLC

2041 E. Gladstone St. Unit N Glendora, CA 91740 USA

Tel: 626-208-9011

**Emergency telephone number:**

CHEMTREC® 1-800-424-9300 (US & Canada Only)

## Section 2: Hazard(s) Identification

**Hazardous classification of the substance or mixture:**

Hazard Class	Category code
Skin Corrosion	1B
Serious Eye Damage	1

**Signal word:** Danger

**Pictogram:**



**Hazard statement(s):**

H314 Causes severe skin burn and eye damage.

**Precautionary statement(s):**

P264 Wash face, hands, and any exposed skin thoroughly after handling.

P280 Wear protective gloves, protective clothing, eye protection, face protection.

**Response statement(s):**

P303+P361+P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinses skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P310 Immediately call a POISON CENTER or doctor

P304+P341 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Storage statement(s):**

P405 Store locked up.

**Disposal statement(s):**

P501 Dispose of contents/container in accordance with local, regional, national, international regulations.

**Hazard(s) not otherwise classified:** Ingestion of large amounts of this product may result in fluoride poisoning.

**Label elements:** See tables above

**HMIS Ratings:**

Health: 2

Flammability: 0

Reactivity: 0

**NFPA Ratings:**

Health: 2

Flammability: 0

Reactivity: 0

Special hazard: None

## Section 3: Composition/Information on Ingredients

Component	CAS No.	Concentration (wt%)
Fluoroboric acid	16872-11-0	5-8%

Any concentration shown as a range is to protect the confidentiality or is due to batch variation. Only hazardous components are shown.

## Section 4: First-Aid Measures

**General information:**

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical aid immediately.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid immediately.

**Skin contact:** Wash the areas of contact with water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately.

**Ingestion:** Do not induce vomiting. Rinse mouth. Get medical aid immediately.

**Most important symptoms and effects, both acute and delayed:** No information.

**Recommendation for immediate medical care and special treatment needed, when necessary:** No information.

## Section 5: Fire-Fighting Measures

**Extinguishing media:** Dry chemical, foam, carbon dioxide, water fog. Use methods suitable to fight the surrounding fire.

**Special hazards arising from the substance or mixture:** acidic liquid and irritating fume.

**Special protective equipment or precautions for firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to the release of irritating fume.

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:** Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

**Environmental precautions:** Do not allow the material to be released to the environment without proper governmental permits.

**Methods and materials for containment and cleaning up:** Absorb with a liquid binding material (sand, diatomite, acid binder, universal binders, sawdust). Dispose of contaminated material as waste according to section 13.

## Section 7: Handling and Storage

**Precautions for safe handling:** Wear protective equipment. Ensure good ventilation in the workplace. Open and handle with care.

**Condition for safe storage:** Keep container tightly sealed. Store in an approved corrosive liquid storage container/area. Store locked up.

**Incompatibilities:** Strong oxidizing agents, metals, strong bases, acid anhydrides, cyanides, combustible material, carbonates.

**Specific storage requirement(s):** No information.

## Section 8: Exposure Controls/Personal Protection

**Exposure Limits**

Component	CAS No.	ACGIH TLV	OSHA PEL
Fluoroboric acid	16872-11-0	TWA 2.5 mg/m3	TWA 2.5 mg/m3

**Engineering controls:** Use general and/or local exhaust ventilation to control the vapor concentration.

**Eye protection:** Wear safety glasses or goggles.

**Skin protection:** Wear protective clothing and chemical-resistant gloves.

**Respiratory protection:** Use a self-contained respiratory device in an emergency.

---

## Section 9: Physical and Chemical Properties

<b>Appearance:</b>	Clear liquid
<b>UFL/LEL:</b>	Not determined
<b>LFL/LEL:</b>	Not determined
<b>Odor:</b>	Not determined
<b>Vapor pressure:</b>	Not determined
<b>Odor threshold:</b>	Not determined
<b>Vapor density:</b>	Not determined
<b>pH:</b>	<1
<b>Relative density:</b>	Approximately 1 g/cm3
<b>Melting Point/Freezing point:</b>	Approximately 0 °C
<b>Solubility in water:</b>	Miscible
<b>Boiling point/boiling range:</b>	Approximately 100 °C
<b>Flashpoint:</b>	Not determined
<b>Evaporation Rate:</b>	Not determined
<b>Flammability (solid, gas):</b>	Not applicable
<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Auto-ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Viscosity:</b>	Not determined

---

## Section 10: Stability and Reactivity

**Reactivity:** No information.

**Chemical stability:** Stable under recommended conditions.

**Stabilizer(s):** Not required.

**Safety issues that may arise should the product change in appearance:** No information.

**Thermal decomposition/ conditions to Avoid:** Decomposition will not occur if used and stored according to specifications.

**Possibility of hazardous reactions:** None under normal processing.

**Incompatibilities:** Strong oxidizing agents, metals, strong bases, acid anhydrides, cyanides, combustible material, carbonates.

**Hazardous decomposition products:** Hydrogen fluoride.

---

## Section 11: Toxicological Information

### For Fluoroboric Acid:

#### Acute toxicity:

Oral rat LD50 100 mg/kg

#### Other exposure effects:

On the Skin: Corrosive effect.

On the Eye: Corrosive effect.

Inhalation: No information.

Sensitization: No information.

**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from NTP, IARC, ACGIH, or OSHA.

---

## Section 12: Ecological Information

Do not empty to drains.

### Aquatic Toxicity:

Fluoroboric acid, freshwater fish, *Carassius auratus*: LC50 (72h): 20 mg/L

Fluoroboric acid, freshwater fish, *Brachydanio rerio*: LC50 (96h static): 2600 mg/L

**Persistence and degradability:** Miscible with water  
Persistence is unlikely based on information available.

### Behavior in environmental system:

**Bioaccumulative potential:** No information.

**Mobility in soil:** Will likely be mobile in the environment due to its water solubility.

**Additional ecological information:** No information.

**Other adverse effects:** No information.

---

## Section 13: Disposal Considerations

Place in a chemical waste container for proper disposal in an approved waste disposal facility. Dispose of the content and container in accordance with local, regional, national, international regulations.

---

## Section 14: Transport Information

**D.O.T. shipping name:** Fluoroboric acid

**D.O.T. hazard class:** 8

**UN number:** UN1775

**Packing group:** II

---

## Section 15: Regulatory Information

**Not meant to be all inclusive, selected regulation represented**

**OSHA status:** No information.

**California Proposition 65:** Not listed.

**TSCA status:** All components are listed.

---

## Section 16: Other Information

**Disclaimer:** The information above is believed to be accurate and represents the best information currently available to us.

ES Laboratory, LLC makes no warranty, express or implied, as to its accuracy, 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 purposes. We shall not be liable for any damages to person or property resulting from its use.

**Revised Date:** 10/2/2021