SAFETY DATA SHEET: FLUOBORIC ACID, 48%

1. IDENTIFICATION

Product Name: FLUOBORIC ACID, 48%
Synonyms: Fluoroboric acid; Hydrogen tetrafluoroborate; Tetrafluoroboric acid; Borofluoric acid
Formula and Formula Weight: HBF4  87.81
Integra numbers beginning with: F570.50
Recommended Use: Commercial/industrial use
Restrictions on Use: No information available

INTEGRA Chemical Company
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)
1216 6th Ave N
Kent WA 98032
Phone: 253-479-7000

2. HAZARDS IDENTIFICATION

OSHA Classification: Hazard Category: Hazard Statement:
Acute Toxicity - Oral 3 Toxic if swallowed.
Skin Corrosion/Irritation 1A Causes severe skin burns and eye damage.
Eye Damage/Irritation 1 Causes serious eye damage.

Precautionary Statements

Prevention:
Do not breathe mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves, protective clothing, eye protection, face protection.

Response
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water, shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center, doctor.
Specific treatment (see first aid section on this label)
Wash contaminated clothing before reuse.

Storage
Store locked up.

Disposal
Dispose of contents, container in accordance with all governmental regulations.

Hazards Not Otherwise Classified: Lachrymator

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Synonyms</th>
<th>CAS #</th>
<th>% Weight</th>
</tr>
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<tbody>
<tr>
<td>Water</td>
<td></td>
<td>07732-18-5</td>
<td>50 - 55</td>
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<tr>
<td>Fluoboric acid</td>
<td>Fluoroboric acid; Hydrogen tetrafluoroborate; Tetrafluoroboric acid</td>
<td>16872-11-0</td>
<td>45 - 50</td>
</tr>
</tbody>
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4. FIRST AID MEASURES

Inhalation: Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult administer oxygen. Seek medical attention.

Eye Contact: Flush eyes with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek immediate medical attention.

Skin Contact: Immediately remove contaminated clothing. Flush skin with water for at least 15 minutes. Seek immediate medical attention.

Ingestion: Do not induce vomiting. If victim is conscious, rinse mouth, give water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Additional notes: Symptoms and effects include burns to skin, eyes, mouth, throat; respiratory irritation; coughing, breathing difficulty, chest pains.
5. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: 5 to 10 mm Hg @20°C

Odor: Clear, colorless liquid
Odor Threshold: Not available
pH: Not available

Partition Coefficient: n-octanol/water
Decomposition Temperature: 130 °C

Viscosity: Not available

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Prevent spread of spill. Wear full protective equipment, including a complete protective suit and an appropriate respirator depending upon the size of the spill. Carefully neutralize with soda ash or lime. Place material into clean disposal container. Flush spill area with water.

Storage and Handling: Store locked up in a cool, dry, well-ventilated corrosive materials storage area away from incompatible materials. Keep containers tightly closed and protect them from physical damage. Minimize exposure to air and light.

Do not breathe mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves, protective clothing, eye protection, face protection.

7. HANDLING AND STORAGE

Engineered Controls: Use general or local exhaust ventilation to meet TLV and PEL requirements.
Respiratory Protection: Respiratory protection required if airborne concentrations exceed PEL or TLV. Use a NIOSH approved respirator with a particulate filter. A full-facepiece positive-pressure, air-supplied respirator should be on hand for use in emergency situations.
Skin/Eye Protective Equipment: Safety goggles, face shield, chemical-resistant gloves and protective clothing appropriate for the risk of exposure.
Facilities storing or utilizing this material should have readily accessible eyewash stations and safety showers. Select respirators and other safety equipment in accordance with regulations and based upon the particular conditions of use and risk of exposure. Always use safe chemical-handling and good industrial hygiene practices.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

OSHA & ACGIH Exposure Limits:
Water None identified
Fluoboric acid OSHA TWA: 2.5 mg/m3 (as F)  ACGIH TWA: 2.5 mg/m3 (as F)

9. PHYSICAL AND CHEMICAL PROPERTIES

Apearance: Clear, colorless liquid
Odor: Not available
Odor Threshold: Not available
pH: Not available
Melting/Freezing Point: Not available
Initial Boiling Point and Boiling Range: 130 °C
Flash Point: Not available
Evaporation Rate: 1 Butyl Acetate=1
Flammability: Not available
Flammable or Explosive Upper: Not available
Limits (% by volume in air) Lower: Not available
Vapor Pressure: 5 to 10 mm Hg @20°C
Vapor Density: 3.0
Relative Density: 1.84 Water=1
Solubility: Miscible with water
Partition Coefficient: n-octanol/water Not available
Auto-Ignition Temperature: Not available
Decomposition Temperature: Not available
Viscosity: Not available

10. STABILITY AND REACTIVITY

Reactivity: No information available
Stability: Stable
Possibility of Hazardous Reactions: Hazardous polymerization will not occur
Conditions to Avoid: None identified
Incompatibles: Incompatible with strong bases. Silicates.
Decomposition Products: Hydrogen fluoride and boron

11. TOXICOLOGICAL INFORMATION

Effects of Over Exposure:
Inhalation: Harmful if inhaled. Irritating to the nose and throat and respiratory system. Overexposure may cause coughing, difficulty in breathing and chest pains.
12. ECOLOGICAL INFORMATION

Aquatic Toxicity Data:  
- Water: No information available
- Fluoroboric acid: No information available

Terrestrial Toxicity Data:  
- Water: No information available
- Fluoroboric acid: No information available

Persistence and degradability: No information available
Bioaccumulative potential: No information available
Mobility in soil: No information available
Other adverse effects: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Procedures: Dispose of material and containers in accordance with all local, state and federal regulations.

14. TRANSPORTATION INFORMATION

This product is a regulated material for domestic ground transportation, per CFR Title 49.

- UN Number: UN1775
- Proper Shipping Name: Fluoroboric acid
- Packing Group: II
- Hazard Class: 8
- Environmental hazards: No information available
- Special precautions: No information available
- Bulk transport: No information available

15. REGULATORY INFORMATION

Fluoroboric acid is listed in the TSCA inventory.

16. OTHER INFORMATION

OSHA SDS #: 25659 rev 101 6.30.2015

NE = Not established, NA = Not applicable or Not available

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**** END OF SDS *****