### Hydrofluoric Acid

#### 1. Corrective Response Actions
- Dilute and disperse.
- Chemical and Physical Treatment: Neutralize.

#### 2. Chemical Designations
- **CG Compatibility Group**: 1; Non-corrodible mineral acid
- **IMO UN Designation**: 8.01790
- **DOT No.**: 1790
- **NAERG Guide No.**: 157
- **Standard Industrial Trade Classification**: 52396

#### 3. Health Hazards
- **Personal Protective Equipment**: Proper protective clothing must be worn that encapsulates the body including the face. All persons handling this product must be familiar with and must observe all the precautions contained in the Manufacturing Chemists’ Association Chemical Safety Data Sheet SD 25. A shower and an eyewash must be available.
- **Symptoms Following Exposure**: Serious and painful burns of eyes and skin.
- **Treatment of Exposures**: INGESTION: have victim drink clear water or milk, do NOT induce vomiting. SKIN: flush with water for at least 15 min. and consult physician. EYES: flush with water for at least 15 min. and consult physician.
- **TLV-TWA**: Not listed.
- **TLV-STEL**: Not listed.
- **TLV-Ceiling**: 3 ppm as F
- **TLV-STEL**: Not listed.
- **Odor Threshold**: Currently not available.
- **IDLH Value**: Not listed.
- **ISOHA PEL-Ceiling**: Not listed.
- **OSHA PEL-STEL**: Not listed.
- **OSHA PEL-TWA**: Not listed.
- **EPA AEG1**: Not listed.
- **EPA AEG2**: Not listed.

#### 4. Fire Hazards
- **Flash Point**: Not flammable
- **Flammable Limits in Air**: Not flammable
- **Fire Extinguishing Agents**: Not pertinent
- **Special Hazards of Combustion**: Products: Toxic and irritating vapors are generated when heated.

#### 5. Chemical Reactivity
- **Reactivity with Water**: No reaction
- **Reactivity with Common Materials**: Will attack glass, concrete and certain metals containing silica, such as cast iron. Will attack natural rubber, leather, and many organic materials. May generate flammable hydrogen in contact with some metals.
- **Stability During Transport**: Stable
- **Neutralizing Agents for Acids and Caustics**: Flush with water; apply powdered limestone, slaked lime, soda ash, or sodium bicarbonate.
- **Polymerization**: Not pertinent
- **Inhibitor of Polymerization**: Not pertinent

#### 6. Water Pollution
- **Aquatic Toxicity**: 60 ppm, *fish/mollusk/fresh water* ~Time period not specified
- **Waterfowl Toxicity**: Currently not available
- **Biological Oxygen Demand (BOD)**: None
- **Food Chain Concentration Potential**: None
- **GESAMP Hazard Profile**: Bioaccumulation: 0 Damage to living resources: 2 Human Oral hazard: 2 Human Contact hazard: 0 Reduction of amenities: XX

#### 7. Shipping Information
- **RCRA Hazard Classification**: Not pertinent
- **Vapor (Gas) Specific Gravity**: Not pertinent
- **Weight**: Not pertinent
- **Flash Point**: Not pertinent
- **Heat of Vaporization**: 361 cal/g = 15.1 X 10 Java
- **Heat of Solution**: 54.7 cal/g

#### 8. Physical & Chemical Properties
- **Specific Gravity**: 1.258 at 25°C (liquid)
- **Liquid Surface Tension**: Not pertinent
- **Water Interfacial Tension**: Not pertinent

#### 9. Notes
- **Flash Point**: Not pertinent
- **Vapor (Gas) Specific Gravity**: Not pertinent
- **Waterfowl Toxicity**: Currently not available
- **Biological Oxygen Demand (BOD)**: None
- **Food Chain Concentration Potential**: None
- **GESAMP Hazard Profile**: Bioaccumulation: 0 Damage to living resources: 2 Human Oral hazard: 2 Human Contact hazard: 0 Reduction of amenities: XX

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#### 3.1 Personal Protective Equipment
Proper protective clothing must be worn that encapsulates the body including the face. All persons handling this product must be familiar with and must observe all the precautions contained in the Manufacturing Chemists’ Association Chemical Safety Data Sheet SD 25. A shower and an eyewash must be available.
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