



**Protective Equipment:**

Wear self-contained breathing apparatus and adequate protective clothing

**6. Accidental Release Measures**

**Personal Precautions:**

Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

**Environmental Precautions:**

Seal off all sewer exits

**Methods for Cleaning Up:**

Stop release and prevent material from entering sewers and waterways.

Evacuate area and confine vapours.

Cover with dry lime or soda ash, pick up, keep in a closed container and hold for waste disposal.

Ventilate confined area and wash spill site after material pickup is complete.

**7. Handling and Storage**

**Technical Measure to Prevent user Exposure**

Use extractor hoods

**Safe Handling Precautions**

Handle with care to prevent accidental dispersion, splashing or emission of fumes. Avoid contact with incompatible materials.

### **Technical Storage Measures**

The floor of the work area should be adapted to enable recuperation or neutralisation of all the product spilt if leakage occurs.

### **Storage Conditions**

Containers must be labelled and kept tightly closed.

Store in a well aired, cool, dry place away from all fire hazards and reactive materials.

### **Incompatible Products**

Steel, glass, copper, aluminium. Separate from strong bases, food and foodstuffs.

## **8. Exposure Control/Personal Protection**

**PPE:** Suitable eye protection

**Inhalation:** In case of insufficient ventilation, use suitable respiratory protection.

**Skin:** Overalls adequate for use with acids and rubber boots.

**Eyes:** Never spray towards the face or body.

**Ingestion:** Always observe rules of hygiene. Wash hands before eating, drinking or smoking.

**Hand:** Anti-acid gloves made of rubber, nitrile or butyl.

**General:** Appropriate hand protection and protective clothing should always be used and suitable ventilation to be used at work stations with local exhaust or breathing protection.

Avoid prolonged or repeated exposure.

## **9. Physical and Chemical Properties**

### **Physical State**

Fuming liquid

### **Colour**

Colourless to straw coloured liquid.

### **Form and Odour**

Unpleasant sour, pungent odour.

### **pH**

Acid (pH=1 at 42%)

### **Boiling, Melting and/or Decomposition Points**

The substance decomposes on heating or on burning, producing toxic fumes of fluoride.

### **Flashpoints**

Non-flammable.

### **Explosion Properties (LEL/UEL)**

Non-explosive

## **10. Stability and Reactivity**

### **Stability:**

Stable if stored under normal conditions. Explosive if heated.

### **Materials to Avoid**

Strong oxidising agents, bases and water. Glass, stoneware.

## **11. Toxicological Information**

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract, eyes and skin.

Inhalation may result in spasm, inflammation and oedema of the larynx and bronchi, chemical pneumonitis and pulmonary oedema.

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

Symptoms of exposure to inorganic fluorides may include valivation, nausea, vomiting, abdominal pain, fever and laboured breathing. Chronic fluorine poisoning can result in

sclerosis of the bones. Calcification of ligaments, loss of weight, anorexia, anaemia, dental effects. Ingestion of large doses can cause severe diarrhoea, and cramp-like pains.

Symptoms may be delayed up to 24 hours depending upon the fluoride ion concentration. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or milk of magnesia to conscious victims. Conditions such as hypocalcaemia, hypomagnesaemia and cardiac arrhythmias should be monitored for, since they can occur after exposure.

## **12. Ecological Information**

Accidental spillage would suddenly reduce pH level due to the product's acidic properties. Local disastrous effects are possible. Do not discharge into the natural environment. Neutralise all waste products.

## **13. Disposal Considerations**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all Federal, State and Local Environmental Regulations or contact manufacturer.

## **14. Transport Information**

<b>UN No.:</b> 1778	Corrosive	
<b>ADR/RID:</b> Class 8	<b>Labels:</b> Corrosive	<b>Proper Shipping Name:</b> Phosphoric Acid
<b>Packaging Group:</b> II		
<b>IMDG:</b> Class 8	<b>Labels:</b> Corrosive	<b>Proper Shipping Name:</b> Phosphoric Acid
<b>Packaging Group:</b> II		
<b>IATA:</b> Class 8	<b>Labels:</b> Corrosive	<b>Proper Shipping Name:</b> Phosphoric Acid
<b>Packaging Group:</b> II		

## **15. Regulatory Information**

**R34:** Corrosive

**S26:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advise.

**S27:** Take off immediately all contaminated clothing.

**S45:** In case of accident or if you feel unwell, seek medical advise immediately (show the product label where possible)

## **16. Other Information**

### **Recommended Use:**

Sterilization of equipment

Electroplating

Tanning of animal hides.

Ceramics and Glass: Glass etching

Hardening of cement  
Oil well acidising  
Rust and stain removal for textiles  
Wood preservative  
Water Fluoridation

**Take precautionary measures against static discharges.**  
**Contents under pressure: Never puncture or incinerate even when empty.**  
**In case of any discomfort, always seek medical advice.**