

Other Properties:

None Available

Ingredients

Chemical Entity	CAS No	Proportions (%)
Hydrofluoric acid	7664-39-3	<7%
Sulfuric acid	766-39-3	<24%
Dye		<.001
Water	7732-18-5	>92%

Note Manufacturer has supplied full ingredient information to allow CHEMWATCH assessment.

HEALTH HAZARD INFORMATION

Acute

Swallowed The liquid is highly corrosive and toxic and is capable of causing severe burns and may be fatal if swallowed.

Eye The liquid is corrosive and extremely irritating to the eyes and is capable of causing severe damage with loss of sight.

Skin The liquid is corrosive and highly irritating to the skin, it is absorbed by the skin and is capable of causing burns. Symptoms of exposure may be delayed. The skin is readily penetrated by the fluoride ion causing liquefaction necrosis of the soft tissues and decalcification and corrosion of bone. Healing is delayed and necrotic changes may continue to occur and spread beneath a layer of tough coagulated skin. The material may accentuate any pre-existing skin condition.

Inhaled The vapour is highly irritating to the upper respiratory tract and lungs and is harmful if inhaled. Acute effects of fluoride inhalations include irritation of nose and throat, coughing and chest discomfort. A single acute over-exposure may even cause nose bleed. Pre-existing respiratory conditions such as emphysema, bronchitis may be aggravated by exposure. Occupational asthma may result from exposure.

Chronic Principal Routes of exposure are by accidental skin and eye contact and by inhalation of vapours especially at higher temperatures. Inhalation of vapour may cause irritation of the mucous membranes of the nose, throat and lungs. Symptoms of exposure may be delayed. Hydrofluoric acid is extremely corrosive and continues to cause tissue necrosis until it has been removed or neutralised. All persons suspected of having burns or of having inhaled hydrofluoric acid MUST be treated promptly and rigorously.

First Aid

Advice For advise, contact a Poisons Information Centre (Phone eg. Australia 13 11 26; New Zealand 03 4747 000 [Not after May 2005] or 0800 764 766 or a doctor at once).

Swallowed If swallowed, do NOT induce vomiting.

Eyes If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

Skin If skin contact occurs, immediately remove contaminated clothing. Flush skin under water for 15 minutes. They apply calcium gluconate gel. Contact the Poisons Information Centre.

Safety Points

Avoid contact with eyes
Wear eye protection when mixing or using.
Avoid contact with skin
Wear protective gloves when mixing or using
Avoid breathing dust (or) vapour (Or) spray mist.
Obtain a supply of calcium gluconate gel
Wash gloves thoroughly, immediately after use.

Advice to Doctor

Advice to Doctor

Following acute or short term repeated exposure to hydrofluoric acid:

1. Subcutaneous injections of Calcium Gluconate may be necessary around the burnt area. Continue application of Calcium Gluconate Gel or subcutaneous Calcium Gluconate should then continue for 3-4 days at a frequency of 4-6 times per day. If a "burning" sensation recurs, apply more frequently.
2. Systemic effects of extensive hydrofluoric acid burns include renal damage, hypocalcaemia and consequent cardiac arrhythmias. Monitor haematological, respiratory, renal, cardiac and electrolyte status at least daily. Tests should include FBE, blood gases, chest X-ray, creatinine and electrolytes, urine output, Ca ions, Mg ions and phosphate ions. Continuous ECG monitoring may be required.
3. Where serum calcium is low, or clinical, or ECG signs of hypocalcaemia develop, infusions of calcium gluconate, or if less serious, oral Sandocal, should be given. Hydrocortisone 500 mg in a four to six hourly infusion may help.
4. Antibiotics should not be given as a routine, but only when indicated.
5. Eye contact pain may be excruciating and 2-3 drops of 0.05% pentocaine hydrochloride may be instilled, followed by further irrigation.

Biological Exposure Index – BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
1. Fluorides in urine	3mg/gm Creatinine	Prior to shift	B, NS
	10 mg/gm Creatinine	End of shift	B, NS

B: Background levels occur in specimens collected from subjects NOT exposed

NS: Non-specific determinant; also observed after exposure to other materials.

PRECAUTION OF USE

Exposure standards

<Hydrofluoric Acid>

None assigned for mixture. Refer to individual constituents as hydrogen fluoride.

TLV C: 3 ppm, 2.6 mg/m³ (as F)

ES Peak: 3 ppm, 2.5 mg/m³

IDLH Level: 30 ppm

Note: Detector tubes for hydrogen fluoride, measuring in excess of 1.5 ppm, are available commercially. Long-term measurements (8 hrs) may be conducted to detect concentrations exceeding 0.25 ppm.

<Sulfuric Acid>

TLV TWA: 1 mg/m³; STEL: 3 mg/kg A2

Warning: this substance has been classified by the ACGIH as A2 Suspected Human Carcinogen.

ES TWA: 1 mg/m³; STEL 3 mg/m³

IDLH Level: 80 mg/m³

Note: Detector tubes for sulfuric acid, measuring in excess of 1 mg/m³, are commercially available.

Engineering Controls

Use in a well-ventilated area. General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

Personal Protection

Eye

Chemical goggles. Full-face shield. Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

Hands/Feet

PVC gloves. Viton gloves. PVC safety gumboots.

Other

Acid-resistant overalls, overalls, PVC Apron, PVC protective suit may be required if exposure severe. Eyewash unit. Ensure there is ready access to a safety shower. Always ensure that a supply of calcium gluconate gel or calcium carbonate tablets is on hand. The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information, consult site-specific CHEMWATCH data (if available), or our Occupational Health and Safety Advisor

Flammability

SAFE HANDLING INFORMATION

Storage and Transport

Suitable Container:

Plastic container. Plastic carboy. Check that containers are clearly labelled. Packaging as recommended by manufacturer.

Storage Incompatibility:

Segregate from alkalis, oxidising agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.

Storage Requirements

Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storing and handling recommendations.

Transportation

Class 8: Corrosives shall not be loaded in the same vehicle or packed in the same freight container with:
Class 1: Explosives;
Class 4.3: Dangerous when wet substances;
Class 5.1: Oxidising agents;
Class 5.2: Organic peroxides;
Class 6: Poisonous (toxic) substances (where the poisonous substances are cyanides and the corrosives are acids):
Class 7: Radioactive substances;
Foodstuff and foodstuff empties.

Spills and Disposals**Minor spills**

Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable labelled container for waste disposal.

Major spills

Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or watercourse. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. If contamination of drains or waterways occurs, advise emergency services.

Disposal

Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Authority for disposal. Treat and neutralise at an effluent treatment plant. Use soda ash or slaked lime to neutralise. Recycle containers wherever possible, otherwise dispose of in an authorised landfill.

Fire/Explosion Hazard

Not combustible. Not consider to be a significant fire risk. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas. Heating may cause expansion or decomposition leading to violent rupture of containers. Decomposes on heating and may produce toxic fumes of carbon monoxide (CO). May emit acrid smoke. May emit poisonous fumes. May emit corrosive fumes. Other decomposition products include sulfur oxides (SOx) and fluorides.

OTHER INFORMATION

Health hazard	3
TOXICITY	2
Flammability	0
Reactivity	3
Body Contact	3
SUBSIDIARY RISK	6.1

Scale: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

CONTACT POINT

ORGANISATION	TELEPHONE	ASK FOR
Poisons Information Centre – Australia Wide	131126	
Eazygleam Products Pty Ltd	+61-(0)7-3274 2593	Andrew Gilbert
Fire Brigade	000	Fire Brigade
Police	000	Police

Every endeavor has been made to ensure that the information contained in this publication is reliable and offered in good faith. It is meant to describe the safety requirements of our products and should not be construed as guaranteeing specific properties. Customers are encouraged to conduct their own tests as end user suitability of the product for particular uses is beyond our control. The information is not intended as an inducement to bargain and no warranty expressed or implied is made as to its accuracy, reliability or completeness. Eazygleam Pty Ltd accepts no liability for loss, injury or damage arising from reliance upon the information contained in this data sheet except in conjunction with the proper use of the product to which it refers. Due care should be taken that the use and disposal of this product is in compliance with appropriate Federal, State and Local Government regulations.