

Section 1. Product and Company Identification

Product Name Pinatec 6 HNW
CAS Number Mixture

Parchem - fine & specialty chemicals
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EMERGENCY RESPONSE NUMBER
CHEMTEL
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Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

GHS Classification

Corrosive to metals 1
H290 May be corrosive to metals.
Acute toxicity 2 Oral
H300 Fatal if swallowed.
Acute toxicity 2 Inhalation
H330 Fatal if inhaled.
Acute toxicity 1 Dermal
H310 Fatal in contact with skin.
Skin corrosion 1A
H314 Causes severe skin burns and eye damage.

GHS Label Elements

Pictograms:



Signal word: DANGER

Hazard and precautionary statements

Hazard Statements

H290 May be corrosive to metals.
H300 Fatal if swallowed
H314 Causes severe skin burns and eye damage
H315 Causes skin irritation
H318 Causes serious eye damage
H330 Fatal if inhaled.

H402 Harmful to aquatic life

Precautionary Statements

P260 Do not breathe dust/fumes/gas/mist/vapors/spray.

P262 Do not get in eyes, on skin, or on clothing.

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302 + 362 + 353 IF ON SKIN: Take off contaminated clothing. Wash with plenty of water/...

P304+310 + 340 IF INHALED: Immediately call a POISON CENTER/doctor/... Remove person to fresh air and keep comfortable for breathing.

P305 + 315 + 352 IF IN EYES: Get immediate medical advice/attention. Wash with plenty of water/...

P315 Get immediate medical advice/attention.

P404 Store in a closed container.

P403+235 Store in a well ventilated place. Keep cool.

Emergency Overview: Clear to slightly yellow, corrosive fuming liquid with an extremely acrid odor. Both liquid and vapor can cause severe burns to all parts of the body. Specialized medical treatment is required for all exposures. May cause severe respiratory tract irritation with possible burns.

Potential Health Hazards

Skin: Both liquid and vapor can cause severe burns. Product will penetrate skin and attack underlying tissues. Deep ulcers of the skin or hypocalcaemia may be a result of large or multiple burns. May cause skin rash and cold and clammy skin with cyanosis or pale color.

Eyes: Both the liquid and the vapor can cause irritation or severe corneal burns.

Ingestion: May cause severe and permanent damage to the digestive tract including tract burns and perforation. Even with small amounts of dilute solutions ingested, possibly fatal effects including hypocalcaemia may occur, which if not properly treated, may result in death.

Inhalation: Can cause nose and throat burns, lung inflammation, and pulmonary edema. Inhalation may be fatal as a result of spasm, inflammation, and edema of the larynx and bronchi. Also results in other toxic effects including hypocalcaemia.

Chronic: Repeated inhalation may cause chronic bronchitis. Repeated exposure may cause erosion of teeth. Effects may be delayed.

Section 3. Composition / Information on Ingredients

Common Name Pinatec 6 HNW
Synonym(s) Blend of Hydrofluoric Acid, Nitric Acid, and Water
Formula Hydrofluoric Acid: HF
Nitric Acid: HNO₃
Water: H₂O
CAS Number Mixture

COMPONENT	CAS NUMBER	CONCENTRATION
Hydrofluoric Acid	7664-39-3	35 – 40%
Nitric Acid	7697-37-2	30 – 35%
Water	7732-18-5	30 – 35%

Section 4. First Aid Measures

Skin: Remove the victim from the contaminated area and immediately wash the burned area with plenty of water for a minimum of 15 minutes. Limit washing to 5 minutes if treatment specific for the HF/Nitric exposure is available. Remove all contaminated clothing while washing continuously. After thoroughly washing for at least 5 minutes the burned area should be immersed in a solution of 0.13% iced aqueous zephiran chloride until pain is relieved. For larger burns or burns treated with calcium gluconate gel, a physician should inject a 5% aqueous calcium gluconate beneath, around and in the burned area. Use of local anesthetics is not recommended as a reduction in pain is an indicator of effectiveness of treatment.

Eyes: Get medical aid immediately, preferably an eye specialist. Do not allow victim to rub or keep eyes closed. At least 30 minutes of eye irrigation is required, while ensuring to keep eyelids apart and away from eyeballs during irrigation. If a physician is not immediately available apply one or two drops of 0.5% tetracaine hydrochloride solution or any other aqueous topical ophthalmic anesthetic and continue irrigation.

Ingestion: Drink large amounts of water to dilute. Do NOT induce vomiting. If victim is conscious and alert, several glasses of milk or milk of magnesia may be given for soothing effect. Take victim to a doctor.

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If breathing has stopped, start artificial respiration at once. If breathing is difficult, give oxygen. Calcium Gluconate, 2.5% in normal saline may be given by nebulizer with oxygen. Do not give stimulants unless instructed to do so by a physician. Victim should be examined by a physician and held under observation for at least 24 hours.

Advice to Physician: For burns of large skin areas (greater than 25 square inches), for ingestion and for significant inhalation exposure, severe systemic effects may occur. Monitor and correct for hypocalcaemia, cardiac arrhythmias, hypomagnesaemia, and hyperkalemia. In some cases hemodialysis may be indicated. For certain burns, especially of the digits, use of intra-arterial calcium gluconate may be indicated. For inhalation exposures, treat as a chemical pneumonia. Monitor for hypocalcaemia.



Section 5. Firefighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in a pressure demand, MSHA/NIOSH, and full protective gear. Contact with combustible materials may cause a fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool.

Extinguishing Media: Use water or suitable agent for fires adjacent to non-leaking tanks or containers of the material. Do not use solid water streams near ruptured tanks or spills. Acids react with water and can splatter acid onto personnel.

Unusual Fire and Explosion Hazards: WILL REACT VIOLENTLY WITH WATER. Reaction with certain metals generates flammable and potentially explosive hydrogen gas. Considerable heat is evolved when contacted with many substances. Heat increases pressure and may explode container.

Section 6. Accidental Release Measures

In Case of Spill or Other Release: Wear recommended personal protective equipment. Good ventilation is necessary. Discharge will ordinarily be a vapor or a liquid that gives off fumes of HF gas. Those treating spills or repairing leaks must use full protective equipment. Take actions to minimize environmental impact. Try to contain spillage and avoid drainage to areas which cannot be treated. Rapid dilution of the spill with water will reduce the amount of fumes given off. Neutralize spill with lime slurry, soda ash, limestone, caustic soda or other alkaline material.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 for more information.

Section 7. Handling and Storage

Normal Handling: Do not breathe vapor or mist. Always wear recommended personal protective equipment. Use only with adequate ventilation. Avoid all contact with skin, eyes, and clothing, even dilute solutions. Do not add water to acid.

Storage: Keep away from heat, sparks, and flame. Do not store near combustible materials. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammable hydrogen gas can be generated in metal storage containers. Diking of storage tanks is highly recommended. Non-destructive tank thickness testing and other techniques should be utilized for periodic checks of tank wall thickness and to assure equipment integrity.

Section 8. Exposure Controls / Personal Protection

Engineering Controls: Sufficient to reduce vapor and acid mists below permissible TLV levels. Packaging and unloading areas and open processing equipment may require mechanical exhaust systems. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.



Personal Protective Equipment

Skin Protection: For routine product use, wear hydrofluoric acid resistant jacket, trousers, boots, and gauntlet gloves. For increased protection, use air supplied totally encapsulating protective suit.

Eye Protection: As a minimum, wear hard hat, chemical safety goggles, and full face plastic shield. For increased protection, use air supplied hydrofluoric acid resistant hood.

Respiratory Protection: Where required use a respirator approved by NIOSH for HF gas or mists, as applicable. Some exposures may require a NIOSH approved self-contained breathing apparatus or air supplied respirator.

Exposure Guidelines				
Ingredient Name	ACGIH TLV	OSHA PEL	OSHA STEL	NIOSH IDLH
Hydrofluoric Acid	3 ppm - Ceiling	3 ppm (TWA)	6 ppm (15 min)	30 ppm (30 min)
Nitric Acid	2 ppm - Ceiling	2 ppm (TWA)	4 ppm	100 ppm (30 min)
Water	None	None	None	None

Section 9. Physical and Chemical Properties

Physical State: Liquid

Appearance: Colorless to yellow liquid

Odor: Sharp pungent odor

Chemical Formula: 70% HF and 67% Nitric in Water by weight

Molecular Weight: 20.01 (HF) & 63.01 (HNO₃)

Solubility: 100% by weight

% Volatiles: 100%

Vapor Pressure: Not Applicable

Vapor Density: Not Applicable

Evaporation Rate: Not Applicable

Specific Gravity: 1.31

Flash Point: Not Applicable

Section 10. Stability and Reactivity

Chemical Stability: Stable under normal conditions. Decomposes when in contact with air, light, or organic matter.

Conditions to Avoid: High temperatures, incompatible materials, ignition sources, dust generation, moisture, combustible materials, and reducing agents.

Incompatibles: Glass, Concrete, and other silicon bearing materials, will yield silicon tetrafluoride gas. Pressure buildup from this has been known to rupture glass containers. Carbonates, sulfides and cyanides will yield toxic gases including carbon dioxide, hydrogen sulfide and hydrogen cyanide. Alkalis and some oxides will cause a strong and violent exothermic reaction. Common metals will



yield hydrogen gas, a fire and explosive reactive hazard. Corrosive to many materials including leather, natural rubber, and many organics. Considerable heat is evolved and a violent reaction can occur when water is added to the product. In addition, reducing agents, organic acids, alcohols and glycols, aldehydes, amides, amines, azo, diazo and hydrazines, carbamates, caustics, dithiocarbamates, esters, ethers, inorganic fluorides, and hydrocarbons should also be avoided if possible.

Hazardous Decomposition Products: Nitrogen oxides

Hazardous Polymerization: Has not been reported

Section 11. Toxicological Information

RTECS #:

CAS # 7664-39-3: MW7875000

CAS # 7697-37-2: QU5665000

CAS # 7732-18-5: ZC0110000

LD50 / LC50:

CAS # 7664-39-3:

Inhalation, Rat: LC50 = 5100 ppm/5 min

Inhalation, Rat: LC50 = 1300 ppm/60 min

CAS # 7697-37-2:

Inhalation, Rat: LC50 = 67 ppm/4 hours

CAS # 7732-18-5:

Oral, Rat: LD50 = 90 mL/kg

Delayed Effects: Prolonged exposure can cause bone and joint changes in humans. Fluorosis, increased bone density and mottling of teeth.

Section 12. Ecological Information

Environmental: Terrestrial: During transport through the soil, some of the soil material, in particular the carbonate based materials, will be dissolved. The acid will be neutralized to some degree with adsorption of the proton also occurring on clay materials. However, there will be significant amounts of acid that are expected to remain and transport down to the water table.

Aquatic Toxicity: Hydrofluoric Acid is found to be toxic to fish at concentration of at least 60 ppm, with no time specified.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.



Section 14. Transport Information

Proper DOT Shipping Description:

Corrosive Liquid, Toxic, N.O.S., (Hydrofluoric Acid, Nitric Acid)

Hazard Class Label: 8 (6.1)

ID Number: UN2922

Packaging Group: II

Section 15. Regulatory Information

Toxic Substances Control Act

CAS # 7664-39-3 is listed on the TSCA Inventory

CAS # 7697-37-2 is listed on the TSCA Inventory

CAS # 7732-18-5 is listed on the TSCA Inventory

SARA TITLE III / CERCLA:

RQs and TPQs:

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients

Ingredient Name	SATA/CERCLA RQ (lbs.)	SARA EHS TPQ (lbs.)
Hydrofluoric Acid	100 as 100% HF	100 as 100% HF
Nitric Acid	1000 as 100% HNO ₃	1000 as 100% HNO ₃

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800)424-8802] and to your Local Emergency Planning Committee

Section 311 Hazard Class: Immediate. Delayed

SARA 313 Toxic Chemicals:

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percentages are found in Section 2.

Ingredient Name	Comment
Hydrofluoric Acid	None
Nitric Acid	None

Additional Regulatory Information:

Storage or in process use greater than the specified threshold quantity of 1000 lbs. is subject to EPA 40 CFR Part 68 Section 112⁷ Accidental Release Prevention Requirements; Risk Management Programs.



WHMIS Classification (Canada):

Class D, Division 1, Subdivision A

Class E

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Foreign Inventory Status

Canadian DSL (Domestic Substances List)

EINECS (European Inventory of Existing Chemical Substances) (EINECS #: 231-634-8 & 231-714-2)

NFPA Rating

Health: 4

Flammability: 0

Reactivity: 1

Other: N/A

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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