



1. IDENTIFICATION

Product Identifier	Recommended use of the chemical and restrictions on use
Product Name SmartWash® Lightning	Recommended Use Cleaning agent.
Details of the supplier of the safety data sheet	Company Phone Number (501) 847-9031
Supplier Address	Emergency Telephone
Whiting Systems, Inc.	INFOTRAC 1-352-323-3500 (International)
9000 Highway 5 North Alexander, AR 72002	1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification	Acute toxicity - Oral Category 3	Skin corrosion/irritation Category 1 Sub-category B
	Acute toxicity - Dermal Category 2	Serious eye damage/eye Category 1
	Acute toxicity - Inhalation Category 4	
Signal word	Precautionary Statements - Prevention	
Danger		Appearance Colorless liquid
		Physical state Liquid
		Odor Acrid Acid odor
		IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
Precautionary Statements - Prevention		
Wash face, hands and any exposed skin thoroughly after handling	Wear protective gloves/protective clothing/eye protection/face protection	
Do not eat, drink or smoke when using this product	Use only outdoors or in a well-ventilated area	
Do not get in eyes, on skin, or on clothing	Do not breathe dust/fume/gas/mist/vapors/spray	
Precautionary Statements - Response		
Immediately call a POISON CENTER or doctor/physician		
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing		
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing		
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Rinse mouth		
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower		

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Hydrofluoric acid	7664-39-3	2.5-5	*
Phosphoric acid	7664-38-2	1.5-3.5	*

4. FIRST AID MEASURES

General advice When seeking medical attention, emphasize exposure to hydrofluoric acid.

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician immediately. Irrigate open eyelids with 500 to 1,000 cc's of 1% Calcium Gluconate in saline solution.

Ingestion
Rinse mouth. Do NOT induce vomiting. Drink high amounts of calcium based antacid in water followed by milk or milk of magnesia. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Skin Contact
Wash off immediately with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse. Immediate medical attention is required. Apply 2.5% Calcium Gluconate ointment to contacted area.

Most important symptoms and effects, both acute and delayed Symptoms
Vapor causes irritation to nasal and respiratory passages. Irritation and corrosive burns to mouth, throat, and stomach. Causes painful stinging or burning of eyes and lids, watering of eyes. Prolonged contact may even cause severe skin irritation or mild burn. May cause severe burns to skin, eyes and other body tissue.

Physicians Treat symptomatically. Inhaling HF vapors can seriously damage the lungs. Delayed reactions up to and including fatal pulmonary edema may not be apparent for hours after the initial exposure. In 20%-50% HF concentrations, burns can be delayed 1 to 8 hours. Concentrations of less than 20% HF may cause delayed painful erythema up to 24 hours after contact. Latent skin burns and necrosis with slow healing can occur even at concentrations of 2% HF.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Carbon dioxide (CO2). Water. Water spray (fog). Dry chemical. Chemical foam.

Unsuitable Extinguishing Media Do not use solid streams of water, except to cool closed containers.

Specific hazards arising from the chemical Keep containers cool with water spray to prevent container rupture due to steam As in any fire, wear self-contained breathing apparatus pressure-buildup. Contents are corrosive and all personal contact must be avoided. demand, MSHA/NIOSH (approved or equivalent) and full Contact with B:C extinguisher powder may produce large amounts of carbon protective gear. dioxide. Contact with metals may evolve flammable hydrogen gas.

Protective equipment and precautions for firefighters

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment as required.

Methods and material for containment and cleaning up **Methods for containment**

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. For spills in excess of allowable limits (RQ) notify the National Response Center (800) 424-8802; refer to SARA Title III, Section 313 40 CFR 372, and CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements.

Methods for cleaning up

Wash small spills to sanitary sewer. Large spills-confine spill, soak up with approved absorbent, and shovel product into approved container for disposal. For spills in excess of allowable limits (RQ) notify the National Response Center (800) 424-8802; refer to 40 CFR 302 for detailed instructions concerning reporting requirements.

7. HANDLING AND STORAGE

Precautions for safe handling **Advice on safe handling**

Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use personal protection recommended in Section 8. Use only in well-ventilated areas. Protect container from physical damage.

Storage Conditions Keep tightly closed in a dry, cool and well-ventilated place. Keep out of reach of children. Protect from extreme temperatures.

Incompatible materials Strong oxidizing agents. strong acids. **Packaging materials** This product will attack glass, concrete, and certain metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrofluoric acid 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m ³ F S*Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m ³ F (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m ³ (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m ³ 15 min TWA: 3 ppmTWA: 2.5 mg/m ³
Phosphoric acid 7664-38-2	STEL: 3 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ (vacated) STEL: 3 mg/m ³	IDLH: 1000 mg/m ³ TWA: 1 mg/m ³ STEL: 3 mg/m ³

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Provide sufficient mechanical ventilation to maintain exposure below TLV(s). Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety goggles.

Respiratory protection None needed under normal use conditions with adequate ventilation. If the occupational exposure limits are exceeded, a NIOSH approved respirator with acid gas cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin and body protection Saranex, Barricade, Chemrel, Responder, or Butyl rubber gloves required. Do not use nitrile rubber, polyvinyl alcohol, or polyvinyl chloride. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties	pH	<1		
Melting point/freezing point	Not determined	Vapor pressure	17 mm Hg @ 20 °C	Kinematic viscosity Not determined
Boiling point/boiling range	100 °C / 212 °F	Vapor density	>1 (Air=1)	Dynamic viscosity Not determined
Flash point	Non-flammable	Specific Gravity	1.026	Explosive properties Not determined
Evaporation rate	<1 (water = 1)	Water solubility	Completely soluble	Oxidizing properties
Flammability (solid, gas)	n/a-liquid	Solubility in other solvents	Not determined	
Flammability Limits in Air	Not applicable	Partition coefficient	Not determined	
Upper flammability limits	Not applicable	Autoignition temperature	Not determined	
Lower flammability limit	Not applicable	Decomposition temperature	Not determined	

10. STABILITY AND REACTIVITY

Reactivity Not reactive under normal conditions

Chemical stability Stable under recommended storage conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Does not occur.

Conditions to avoid Extreme temperatures.

Incompatible materials Strong oxidizing agents. Strong alkalis. Metals. Cyanides. sulfides. Glass. Ceramics.

Hazardous Decomposition Products

Decomposition will not occur if handled and stored properly. In case of fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	Inhalation	Harmful if inhaled.	Eye contact	Causes severe eye damage.
Component Information	Skin Contact	Fatal in contact with skin. Causes severe skin burns.	Ingestion	Toxic if swallowed.
Chemical Name/CAS #	Oral LD50		Dermal LD50	Inhalation LC50
Hydrofluoric acid 7664-39-3	-		-	(= 850 mg/m ³) (Rat) 1 h = 1276 ppm (Rat) 1 h
Phosphoric acid7664-38-2	1530 mg/kg (Rat)		2730 mg/kg (Rabbit)	>850 mg/m ³ (Rat) 1 h

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity- Product Not determined. Values calculated based on chapter 3.1 of the GHS. ATEMix (dermal) 135135 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

Persistence and degradability

Bioaccumulation Not determined.

Mobility Not determined.

Other adverse effects Not determined

13. DISPOSAL CONSIDERATIONS

Disposal of wastes and Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations

California Hazardous Waste Status Phosphoric acid7664-38-2 Corrosive

14. TRANSPORT INFORMATION

DOT	UN/ID No 1760	Proper Shipping Name: Cleaning Coumpound Liquid	Hazard Class/Pkg Grp: 8 / II	Ref: CFR 172.101
		Reportable Quantity (RQ) hydrofluoric acid 100 lbs, phosphoric acid 5000 lbs		
IATA	UN/ID No 1760	Proper Shipping Name: Cleaning Coumpound Liquid	Hazard Class/Pkg Grp: 8 / II	
IMDG	UN/ID No 1761	Proper Shipping Name: Cleaning Coumpound Liquid	Hazard Class/Pkg Grp: 8 / II	

15. REGULATORY INFORMATION

US Federal Regulations SARA 311/312 Hazard Categories

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous
Hydrofluoric acid7664-39-3	100 lb			X
Phosphoric acid7664-38-2	5000 lb			X
Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)	
Hydrofluoric acid7664-39-3	100 lb	100 lb	RQ 100 lb final RQ	RQ 45.4 kg final RQ
Phosphoric acid7664-38-2	5000 lb		RQ 5000 lb final RQ	RQ 2270 kg final RQ

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrofluoric acid7664-39-3	X	X	X
Phosphoric acid7664-38-2	X	X	X

16. OTHER INFORMATION

NFPA

NFPA	Health hazards	Flammability	Instability	Special Hazards
	Not determined	Not determined	Not determined	Not determined
HMIS	Health hazards	Flammability	Physical hazards	Personal protection
	3	0	1	Not determined

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.