Whiting Systems, Inc.
Automated Vehicle Wash Systems Industrial Power Wash Systems
Est. 1974

SAFETY DATA SHEET

Issue Date 11-Aug-2005 **Revision Date** 29-Sep-2016 **Version** 1

1. IDENTIFICATION

Product Identifier
Product Name SmartWash Luminous

Other means of identification
SDS # WS-025

UN/ID No UN1790

Recommended use of the chemical and restrictions on use
Recommended Use Cleaning agent.

Details of the supplier of the safety data sheet
Supplier Address
Whiting Systems, Inc.
9000 Highway 5 North
Alexander, AR 72002

Emergency telephone number
Company Phone Number 1-800-542-9031
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

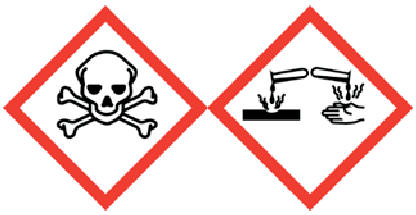
2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Signal word
Danger

Hazard statements
Toxic if swallowed
Fatal in contact with skin
Harmful if inhaled
Causes severe skin burns and eye damage



Appearance Colorless liquid **Physical state** Liquid **Odor** Acrid Acid odor

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not get in eyes, on skin, or on clothing
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Immediately call a POISON CENTER or doctor/physician
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not Applicable
Other Information
Not Applicable

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

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.

Indication of any immediate medical attention and special treatment needed

Note to 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 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 buildup. Contents are corrosive and all personal contact must be avoided. Contact with B:C extinguisher powder may produce large amounts of carbon dioxide. Contact with metals may evolve flammable hydrogen gas.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required.

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 and material for containment and cleaning up

Methods for containment Confine and absorb into approved absorbent.

Methods for cleaning up Place in appropriate containers for disposal.

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.

Conditions for safe storage, including any incompatibilities

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

Packaging materials This product will attack glass, concrete, and certain metals.

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

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/m³ F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m³ F (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m³ (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m³ 15 min TWA: 3 ppm TWA: 2.5 mg/m³
Phosphoric acid 7664-38-2	STEL: 3 mg/m³ TWA: 1 mg/m³	TWA: 1 mg/m³ (vacated) TWA: 1 mg/m³ (vacated) STEL: 3 mg/m³	IDLH: 1000 mg/m³ TWA: 1 mg/m³ STEL: 3 mg/m³

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety goggles. Wear safety glasses with side shields (or goggles).

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.

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.

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

Physical state	Liquid		
Appearance	Blue liquid	**Odor**	Acrid Acid odor
Color	Blue	**Odor threshold**	Not determined

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

Other Information

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 Hazardous polymerization does not occur. Non-hazardous endothermic polymerization may occur in both the liquid and gas phases.

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. Fluorine.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Harmful if inhaled.

Eye contact Causes severe eye damage.

Skin Contact Fatal in contact with skin. Causes severe skin burns.

Ingestion nsur

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrofluoric acid 7664-39-3	-	-	= 850 mg/m³ (Rat) 1 h = 1276 ppm (Rat) 1 h
Phosphoric acid 7664-38-2	1530 mg/kg (Rat)	2730 mg/kg (Rabbit)	>850 mg/m³ (Rat) 1 h

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

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

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 125 mg/kg
ATEmix (dermal) 125 mg/kg
ATEmix (inhalation-dust/mist) 1.1 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrofluoric acid 7664-39-3		660: 48 h Leuciscus idus mg/L LC50		270: 48 h Daphnia species mg/L EC50
Phosphoric acid 7664-38-2		3 - 3.5: 96 h Gambusia affinis mg/L LC50		4.6: 12 h Daphnia magna mg/L EC50

Persistence and degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined.

Chemical Name	Partition coefficient
Hydrofluoric acid 7664-39-3	-1.4

Other adverse effects Not determined

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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

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

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrofluoric acid 7664-39-3	U134			U134

Chemical Name	California Hazardous Waste Status
Phosphoric acid 7664-38-2	Corrosive

14. TRANSPORT INFORMATION

DOT

UN/ID No	UN1790
Proper shipping name	Corrosive liquids, Acid Solution, n.o.s. (hydrofluoric acid, phosphoric acid)
Hazard Class	8
Subsidiary class	6.1
Packing Group	II
Reportable Quantity (RQ)	hydrofluoric acid 100 lbs, phosphoric acid 5000 lbs

IATA

UN/ID No	UN1790
Proper shipping name	Corrosive liquid, Acid Solution, n.o.s. (hydrofluoric acid, phosphoric acid)
Hazard Class	8
Subsidiary hazard class	6.1
Packing Group	II

IMDG

UN/ID No	UN1790
Proper shipping name	Corrosive liquid, Acid Solution, n.o.s. (hydrofluoric acid, phosphoric acid)
Hazard Class	8
Subsidiary hazard class	6.1
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*
DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*
EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
ENCS *- Japan Existing and New Chemical Substances* ***IECSC***
- China Inventory of Existing Chemical Substances ***KECL*** *-*
Korean Existing and Evaluated Chemical Substances
PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Hydrofluoric acid - 7664-39-3	7664-39-3	2.5-5	1.0

SARA 311/312 Hazard Categories

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrofluoric acid 7664-39-3	100 lb			X
Phosphoric acid 7664-38-2	5000 lb			X

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrofluoric acid 7664-39-3	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ
Phosphoric acid 7664-38-2	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrofluoric acid 7664-39-3	X	X	X
Phosphoric acid 7664-38-2	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION

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

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Revision Note
new format
Disclaimer
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 a 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.

End of Safety Data Sheet