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

Safety Data Sheet

Issue Date: 09-Nov-2004 **Revision Date:** 23-Feb-2016 **Version** 1

1. IDENTIFICATION

Product Identifier
Product Name SmartWash Aluma Bright

Other means of identification
SDS # WS-004R

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 (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Clear liquid **Physical state** Liquid **Odor** acrid Acid odor

Classification

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
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
Toxic if inhaled
Causes severe skin burns and eye damage

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
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
Wash contaminated clothing before reuse
Immediately call a poison center or doctor/physician
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
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Monocarbamide Dihydrogen Sulfate	21351-39-3	5-10
Hydrogen fluoride	7664-39-3	5-10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

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

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required. Irrigate open eyelids with 500 to 1,000 cc's of 1% Calcium Gluconate in saline solution.

Skin Contact Remove contaminated clothing while flushing area with drenching shower for 5 minutes. Wash contaminated clothing before reuse. Immediate medical attention is required. Apply 2.5% Calcium Gluconate ointment to contacted area.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediate medical attention is required. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration.

Ingestion Rinse mouth. Do not induce vomiting. Immediate medical attention is required. 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.

Most important symptoms and effects

Symptoms May cause irritation to the mucous membranes and upper respiratory tract. Contact will cause irritation and redness to exposed areas. Exposed individuals may experience eye tearing, redness and discomfort. Irritation and corrosive burns to mouth, throat, and stomach.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Existing conditions aggravated by exposure: skin disorders, skin allergies, respiratory disorders, eye disorders. 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 soft 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

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. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Confine and absorb into approved absorbent.

Methods for Clean-Up Place in appropriate containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use only in well-ventilated areas. Use personal protection recommended in Section 8. 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
Hydrogen fluoride 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 TWA: 2.5 mg/m^3 dust (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 ppm TWA: 2.5 mg/m^3

Other Information Airborne concentrations of 10-15 ppm will irritate the eyes, skin, and respiratory tract; 30 ppm is considered "Immediately Dangerous to Life and Health" (IDLH) and may have irreversible health effects; above 50 ppm, even brief exposure may be fatal.

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	Clear liquid	**Odor**	acrid Acid odor
Color	Colorless	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	<2	
Melting Point/Freezing Point	< 0 °C / < 32 °F	
Boiling Point/Boiling Range	> 100 °C / > 212 °F	
Flash Point	Non-flammable	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	n/a-liquid	

Flammability Limits in Air		
Upper Flammability Limits	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Relative Density	1.066	(1=Water)
Water Solubility	Soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	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 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

Eye Contact Causes severe eye damage.

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

Inhalation Toxic if inhaled.

Ingestion Toxic if swallowed.

Component Information

Chemical Name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Monocarbamide Dihydrogen Sulfate 21351-39-3	= 350 mg/kg (Rat)	> 2 g/kg (Rabbit)	-
Hydrogen fluoride 7664-39-3	-	-	= 0.79 mg/L (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 Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component Information

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Hydrogen fluoride 7664-39-3		660: 48 h Leuciscus idus mg/L LC50	270: 48 h Daphnia species mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Hydrogen fluoride 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.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrogen fluoride 7664-39-3	U134			U134

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN1790
Proper Shipping Name	Hydrofluoric acid solution
Hazard Class	8
Subsidiary Hazard Class	6.1
Packing Group	II
Reportable Quantity (RQ)	Hydrofluoric acid 100 lbs

IATA

UN/ID No	UN1790
Proper Shipping Name	Hydrofluoric acid solution
Hazard Class	8
Subsidiary Hazard Class	6.1
Packing Group	II

IMDG

UN/ID No	UN1790
Proper Shipping Name	Hydrofluoric acid solution
Hazard Class	8
Subsidiary Hazard Class	6.1
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Monocarbamide Dihydrogen Sulfate	X	X	X	Present				
Hydrogen fluoride	X	X	X	Present	X	Present	X	X

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*

AICS *- Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrogen fluoride 7664-39-3	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Hydrogen fluoride - 7664-39-3	7664-39-3	5-10	1.0

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrogen fluoride	100 lb			X

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrogen fluoride 7664-39-3	X	X	X

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

Issue Date: 09-Nov-2004
Revision Date: 23-Feb-2016
Revision Note: New formula

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