



SAFETY DATA SHEET

NFPA Ratings:

H	F	I
3	0	0

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Arcadian Services
3109 Northington Court
Florence, AL 35630

Telephone Number:
Office: (800) 289-7627
Emergency Phone Number:
1-800-535-5053

Product Name: Nu-Wall

Recommended use of the product and restrictions on use: Use product to clean car wash walls.

Date Revised: May 2013

2. HAZARDS IDENTIFICATION

GHS Classification:

Physical	Health
Not Hazardous	Acute Inhalation Toxicity Category 3 Acute Oral Toxicity Category 4 Eye Corrosion Category 1 Skin Corrosion Category 1A Carcinogen Category 1

GHS Label Elements:



DANGER: Causes severe skin burns and eye damage. Harmful if swallowed. Toxic if inhaled. May cause cancer by inhalation.

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contact. If sterile 1% calcium gluconate solution is available, limit flushing time to 5 minutes. Then, repeatedly irrigate the eye using a syringe filled with 1% calcium gluconate solution. Get immediate medical attention.

SKIN: Avoid direct contact. Wear chemical protective clothing if necessary. As quickly as possible remove contaminated clothing. Shoes, and leather goods (e.g. watchbands, belts). As quickly as possible, flush with lukewarm, gently flowing water for 5 minutes. Immediately after washing, use one of the following measures:

- Begin soaking the affected areas in iced 0.13% benzalkonium chloride (Zephiran®) solution. Use ice cubes, not shaved ice, to prevent frostbite. If immersion is not practical, towels should be soaked with iced 0.13% benzalkonium chloride (Zephiran®) solution and used as a compress for the burned area. Compresses should be changed every two to four minutes. Benzalkonium chloride (Zephiran®) soaks or compresses should be continued until medical attention is available.

b. Wearing chemical protective gloves start massaging 2.5% calcium gluconate gel into the burn site. Apply gel frequently and massage continuously until medical attention is available. If benzalkonium chloride (Zephiran®) or calcium gluconate gel is not available, water rinsing must continue until medical treatment is available. Double bag, label and seal contaminated clothing, shoes and leather goods at the scene for safe disposal.

INGESTION: Immediately contact your poison control center or emergency department. If conscious and responsive, give the victim a fluoride binding substance such as milk (1/2-1 glassful), chewable calcium carbonate tablets or milk of magnesia. Avoid large amounts of liquid as this may cause vomiting. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have the victim lean forward to reduce the risk of aspiration. Get immediate medical attention.

INHALATION: Remove to fresh air. If not breathing use artificial respiration. If breathing is difficult, have qualified personnel administer oxygen. Do NOT allow the victim to move around unnecessarily. Get immediate medical attention. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. In addition to standard first aid, trained personnel should administer a nebulized solution of 2.5% calcium gluconate with oxygen.

MOST IMPORTANT SYMPTOMS: Causes severe burns to the eyes, skin, digestive tract and respiratory tract. Burns may not be immediately painful or visible. May be fatal if swallowed or inhaled. May cause damage to the respiratory tract and lungs if inhaled. Strong inorganic acid mists containing sulfuric acid may cause cancer.

INDICATION OF IMMEDIATE MEDICAL ATTENTION/SPECIAL TREATMENT:

Immediate medical attention is required for all incidents of contact or exposure. For eye contact: Carefully evaluate for eye damage, exposure to dilute solutions may result in delayed symptoms of ocular damage. For skin contact: Decontamination of the contact area is of primary importance. Symptoms may be delayed for several hours. Specific treatment is controversial with no single treatment clearly superior. Topical calcium gluconate gel or magnesium oxide pastes have been successful. Calcium gluconate infiltration may be considered in some cases. Systemic absorption may occur and may require treatment with parenteral calcium salts. For ingestion: Administer fluoride binding substance. Monitor and treat hypocalcemia and hypomagnesemia, parenterally as needed. Observe and evaluate patient for oral and GI burns. For inhalation: Monitor for respiratory distress. Respiratory symptoms may be delayed up to 48 hours. Refer to poison center for the most recent recommendations.

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Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapors, or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing, eye protection, and face protection.

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.
IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower.
Immediately call a POISON CENTER or doctor.
Wash contaminated clothing before reuse.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Immediately call a POISON CENTER or doctor.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Immediately call a POISON CENTER or doctor.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents and container in accordance with local and national regulations.

Supplemental Hazards: Burns may not be immediately painful or visible. Medical treatment is required for all incidents of contact or exposure.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Percent
Water and surfactants	Mixture	Balance
Phosphoric Acid	7664-38-2	10-20
Sulfuric Acid	7664-93-9	10-20
Hydrofluoric Acid	7664-39-3	5-15
2-Butoxyethanol	111-76-2	1-5

The exact concentration is being withheld as a trade secret.

4. FIRST AID MEASURES

EYE: Avoid direct contact. Wear chemical protective gloves if necessary. Immediately flush the eye with tepid water for at least 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irritation or attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye or onto the face. Do not use benzalkonium chloride (Zephiran®) for eye

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5. FIRE FIGHTING MEASURES

SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA: This product is not combustible. Use any extinguishing media that is suitable for the surrounding fire. Water spray may be used to keep fire exposed containers cool. Avoid getting water inside containers.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: This product may react with most metals to form flammable and explosive hydrogen gas. This product is a strong acid which can react with combustible materials and may cause fire. Thermal decomposition may release oxides of sulfur and phosphorus; fluorine, hydrogen fluoride and hydrogen.

FIRE-FIGHTING INSTRUCTIONS: Firefighters must wear positive pressure SCBA and full protective clothing for all fires involving chemicals.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY

PROCEDURES: Evacuate spill area and keep unprotected personnel away. Ventilate area. Promptly clean up spills using full protective clothing as described in Section 8. Aqueous solutions may cause surfaces to be extremely slippery and cause a slip hazard.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

Contain spilled liquid and carefully neutralize with caustic soda, lime or other alkaline material. Prevent liquid from entering watercourses, sewers and natural waterways. Collect with inert absorbent and place in appropriate containers for disposal. Report releases as required by local, state and federal authorities.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Prevent contact with the eyes, skin and clothing. Do not breathe vapors, aerosols and mists. Use with adequate ventilation and protective equipment. Wash thoroughly after handling. Launder contaminated clothing before reuse. Keep in tightly closed container in a cool area when not in use.

Empty containers retain product residues and may be hazardous. Do not cut, braze, solder, grind or weld empty containers. Do not reuse containers. Follow all SDS precautions in handling empty containers.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY COMPATIBILITIES: Store in a cool, well-ventilated area away from all incompatible materials. Keep container tightly closed. Store in corrosion proof area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Water and surfactants	None Established
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Phosphoric Acid	1 mg/m ³ TWA, 3 mg/m ³ STEL ACGIH TLV 1 mg/m ³ TWA OSHA PEL
Sulfuric Acid	0.2 mg/m ³ (thoracic fraction - aerosol) TWA ACGIH TLV 1 mg/m ³ TWA OSHA PEL
Hydrofluoric Acid (as F)	0.5 ppm TWA, 2 ppm Ceiling ACGIH TLV Skin 3 ppm TWA OSHA PEL
2-Butoxyethanol	20 ppm TWA ACGIH TLV 50 ppm TWA OSHA PEL Skin

ENGINEERING CONTROLS: Use local exhaust ventilation for operations where the TLV may be exceeded.

RESPIRATORY PROTECTION: For operations where the exposure limit is exceeded, wear a NIOSH-approved respirator equipped with an acid gas/dust/mist cartridge or a supplied air respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

SKIN PROTECTION: Chemically resistant gauntlet gloves such as butyl rubber are required.

EYE PROTECTION: Face shield with chemical safety goggles required to prevent eye and face contact.

OTHER: Acid resistant protective clothing, such as apron, suit, boots, etc., as needed to prevent skin contact. Suitable washing and eye flushing facilities must be available in the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor: Blue liquid with a sharp acid odor.

Physical State: Liquid	Odor Threshold: Not established
Vapor Density: Greater than 1 (air=1)	Initial Boiling Point/Range: ~100°C (~212°F) (Water)
Solubility In Water: Complete	Vapor Pressure: 14 mmHg @ 20°C (68°F) (Hydrofluoric acid)
Relative Density: Not available	Evaporation Rate: Same as water
Melting/Freezing Point: ~0°C (~32°F) (water)	pH: <1
VOC Content: Not determined	Octanol/Water Coefficient: Not determined
Solubility: Not determined	Decomposition Temperature: Not determined
Viscosity: Not determined	Flammability (solid, gas): Not applicable
Flashpoint: None	Autoignition Temperature: None
Flammable Limits: LEL: Not applicable	UEL: Not applicable

10. STABILITY AND REACTIVITY

REACTIVITY: Not normally reactive

CHEMICAL STABILITY: Stable under normal storage and handling conditions.

POTENTIAL OF HAZARDOUS REACTIONS: Reacts with most common metals to form flammable, explosive hydrogen gas. Reacts with bases generating heat.

CONDITIONS TO AVOID: Avoid excessive heat and elevated temperatures.

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Hydrofluoric Acid: Oral rat LD50 ~>25 mg/kg; Inhalation rat LC50 - 1276 ppm/1 hr; Skin rabbit LD50 - 500 mg/kg
2-Butoxyethanol: Oral rat LD50- 1746 mg/kg; Inhalation rat LC50- >4.26 mg/L/4 hr; Skin rabbit LD50- >841 mg/kg

12. ECOLOGICAL INFORMATION

ECOTOXICITY: No data available

PERSISTENCE AND DEGRADABILITY: No data available

BIOACCUMULATIVE POTENTIAL: No data available

MOBILITY IN SOIL: No data available

OTHER ADVERSE EFFECTS: No data available

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with current local, state and federal regulations. This product, as sold, meets the definition of a hazardous waste under RCRA, characteristic - corrosivity.

14. TRANSPORT INFORMATION

TRANSPORTATION AND HAZARDOUS MATERIALS DESCRIPTION:

US Domestic Transport only: NA1760, Compounds, cleaning liquid (Hydrofluoric acid, Sulfuric acid, Phosphoric acid), 8, II (For containers with greater than 660 lbs, also note RQ)

US Domestic or International Transport: UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Hydrofluoric acid, Sulfuric acid, Phosphoric acid), 8, II (For containers with greater than 660 lbs, also note RQ)

15. REGULATORY INFORMATION

Federal Regulations

CERCLA 103 Reportable Quantity: Releases of this product in excess of the reportable quantity of 660 lbs (based on hydrofluoric acid - 100 lbs) are reportable to the National Response Center. Many states have more stringent reporting requirements. Report spills and other releases as required under federal, state and local regulations.

SARA TITLE III:

Hazard Category for Section 311/312: Acute Health, Chronic Health.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

Phosphoric Acid	7664-38-2	10-20%
Sulfuric Acid (Aerosols only)	7664-93-9	10-20%
Hydrofluoric Acid	7664-39-3	5-15%
2-Butoxyethanol	111-76-2	1-5%

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INCOMPATIBLE MATERIALS: Bases, metals, reducing agents, oxidizing agents, carbides, acetic acid, combustible materials, carbonates, organic materials, rubber, leather, and oxides of silica. Hydrofluoric acid is very reactive and is incompatible with most other materials.

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to decomposition this product may release may release oxides of sulfur and phosphorus; fluorine, hydrogen fluoride and hydrogen.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

INGESTION: Swallowing product will cause severe burns to the mouth, throat and gastrointestinal tract with vomiting, abdominal pain and shock. Systemic poisoning may result. Hypocalcemia, hypomagnesemia, pulmonary edema, metabolic acidosis, ventricular arrhythmias and death are possible. Ingestion of 2-butoxyethanol may cause damage to the blood, liver and kidneys.

INHALATION: Vapors, mists and aerosols will cause severe burns to the eyes, mucous membranes and respiratory system. Shortness of breath, irregular pulse, bloody urine, pulmonary edema, lung inflammation, airway obstruction and systemic poisoning with effects described under ingestion may occur. Severe overexposure may be fatal.

EYE: Causes severe burns with permanent damage and blindness possible. Signs and symptoms may be delayed for up to several hours.

SKIN: Causes severe burns and readily penetrates the skin causing deep tissue layer destruction. Severity and rapidity of onset of signs and symptoms depends on the concentration, duration of exposure and penetrability of the exposed tissues. Swelling, redness and pain may be delayed up to 8 hours after exposure. Burns from hydrogen fluoride are often not reported until the damage is extensive. The destruction of tissue proceeds under the toughened, coagulated skin so that ulcers extend deeply, heal slowly and result in scarring. Prompt treatment of any contact is necessary. Systemic poisoning can result from extensive skin burns with symptoms as described under ingestion.

CHRONIC EFFECTS: Repeated or prolonged overexposure to hydrogen fluoride may result in digestive disturbances and an increase in bone density (fluorosis). Chronic exposure to mineral acid mists can result in dental erosion and chronic bronchitis. Chronic exposure to 2-butoxyethanol may cause damage to the blood, liver and kidneys.

CARCINOGENICITY: Strong inorganic acid mists containing sulfuric acid have been classified as a known human carcinogen (Group 1) by IARC and NTP. A 2-year study in rats found a weak, equivocal fluoride-related increase in the occurrence of osteosarcomas in male rats, and no evidence of carcinogenicity in female rats or male or female mice. The weight of the evidence indicates that fluoridation of water does not increase the risk of developing cancer. IARC has determined that the carcinogenicity of fluoride to humans is not classifiable. None of the components of this product are listed as carcinogens or suspected carcinogens by IARC, NTP or OSHA.

GERM CELL MUTAGENICITY: No data available for the product. This product is not expected to cause mutagenicity.

REPRODUCTIVE TOXICITY: Not expected to be a reproductive toxin.

NUMERICAL MEASURES OF TOXICITY:

Water and surfactants: No toxicity data available

Phosphoric Acid: Oral rat LD50 - 1530 mg/kg; Inhalation rabbit LC50- 1.689 mg/L/1hr; Skin rabbit

LD50 - 2740 mg/kg

Sulfuric Acid: Oral rat LD50 - 2140 mg/kg

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(glycol ether compound)

Section 302 Extremely Hazardous Substances (TPQ): Hydrofluoric Acid (100 lbs), Sulfuric acid (1,000 lbs).

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

16. OTHER INFORMATION

NFPA RATING:	Health = 3	Fire = 0	Instability = 0
HMIS RATING:	Health = 3*	Fire = 0	Physical Hazard = 0

Revision Summary:

5/23/13: Updated format to GHS SDS. Complete review of all sections.

The information relates to this specific material. It may not be valid for this material if used in combination with any other materials or in any process. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his own particular use. Neither the seller nor preparer makes and warranties, express or implied, concerning the information presented.

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