

MATERIAL SAFETY DATA SHEET

Total Solutions
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GENERAL INFORMATION NUMBER: (414) 354-6417
CHEMTREC: (800) 424-9300

REVISION DATE: August 4, 2011
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I - Product Identification

Aluminum Cleaner and Brightener

PRODUCT CODE: 0103

CHEMICAL FORMULATION: Inorganic acid cleaner.

NFPA HAZARD IDENTIFICATION SYSTEM: HEALTH: 4

FLAMMABILITY: 0

REACTIVITY: 1

HAZARD RATING: 4 - Extreme; 3 - High; 2 - Moderate; 1 - Slight; 0 - Insignificant

II - Hazardous Ingredients

Values reported as TWA unless noted.

SUBSTANCE	APPROX %	OSHA PEL	ACGIH TLV	EPA 40 CFR:			CAS #
				302	355	372	
Sulfuric Acid	10.0-20.0	1 mg/m ³	1 mg/m ³	Y	Y	Y	7664-93-9
Hydrofluoric Acid	5.0-10.0	3 ppm	3 ppm C	Y	Y	Y	7664-39-3
Quaternary ammonium compounds	<5.0	N/E	N/E	N	N	N	68187-69-9

Key: PEL: Permissible Exposure Limit TLV: Threshold Limit Value C: Ceiling level STEL: Short Term Exposure Limit
N/A: Not Applicable N/D: Not Determined N/E: Not Established Y: Yes N: No
302: CERCLA List of Hazardous Substances and Reportable Quantities (40 CFR 302.4).
355: SARA TITLE III / List of Extremely Hazardous Substances for Emergency Planning and Notification (40 CFR 355).
372: SARA TITLE III / List of Toxic Chemicals subject to Release Reporting (Community Right to Know) (40 CFR 372).

III - Physical Data

BOILING POINT (°F): N/D SPECIFIC GRAVITY (WATER = 1): 1.139
VAPOR PRESSURE (mm Hg): N/D VOC CONTENT (% by weight): <5.0
VAPOR DENSITY (AIR = 1): N/D EVAPORATION RATE (WATER = 1): N/D
SOLUBILITY IN WATER: Soluble pH: 1.00
APPEARANCE AND ODOR: Clear, slight yellow liquid; characteristic acid odor.

IV - Fire and Explosion Hazard Data

FLASH POINT (°F): None. (TEST METHOD): Closed cup
FLAMMABLE LIMITS IN AIR (VOLUME %) UPPER: N/A LOWER: N/A
EXTINGUISHING MEDIA: Water spray, foam, carbon dioxide, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters must be equipped with full protective gear, including self-contained breathing apparatus. Cool fire exposed containers with water spray. Run-off from fire control may cause pollution. Neutralize run-off with lime, soda ash, etc.
UNUSUAL FIRE AND EXPLOSION HAZARD: Acid may react with metals to create explosive hydrogen accumulations. Fire may produce toxic fumes. Product generates heat upon addition of water, with possible spattering.

V - Reactivity Data

STABILITY: Stable

INCOMPATIBILITY: Alkaline materials, metal salts, oxidizing materials and organic materials.

CONDITIONS TO AVOID: Do not mix with chlorine bleach, ammonia or any other cleaning chemical.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition can produce a wide variety of toxic gases and vapors.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None

VI - Health Hazard Data

ROUTES OF ENTRY **INHALATION:** X **EYE CONTACT:** X **SKIN CONTACT:** X **INGESTION:** X
INGREDIENTS THAT ARE CONSIDERED BY OSHA, NTP, IARC TO BE SUSPECTED HUMAN CARCINOGENS: None.

EFFECTS OF OVEREXPOSURE

IF IN EYES: DANGER Corrosive-Severe irritation, burns, destruction of tissue, blindness.

IF ON SKIN: DANGER Corrosive-Severe irritation, deep ulcerations that may not be immediately painful or evident. Hydrofluoric acid will penetrate the skin and attack underlying tissues and bone. Large burns may also cause hypocalcemia and other toxic effects which may be fatal.

IF SWALLOWED: MAY BE HARMFUL OR FATAL IF SWALLOWED. Severe burns, destruction of tissue. Small amounts or dilute solutions fatal hypocalcemia and systemic toxicity is likely to occur unless medical treatment is immediately obtained.

IF INHALED: Short-term exposure causes nose, throat & respiratory irritation which may be delayed for several hours. Long-term exposure causes nose and throat burns, lung inflammation, pulmonary edema and fatal hypocalcemia.

EMERGENCY AND FIRST AID PROCEDURES

IF IN EYES: Flush eyes and under eyelids with plenty of cool water for at least 15 minutes. Obtain immediate medical attention.

IF ON SKIN: Flush with plenty of cool water for at least 15 minutes while removing contaminated clothing and shoes. Pay close attention to area under nails. Obtain medical attention immediately! Follow by immersing affected skin in an ice cold solution of magnesium sulfate (Epsom Salt) or using a calcium gluconate gel.

IF SWALLOWED: DO NOT INDUCE VOMITING. Give large quantities of water followed with several glasses of milk or several ounces of milk of magnesia. Never give anything by mouth to an unconscious person. Obtain medical attention immediately.

IF INHALED: Remove person to fresh air. Administer artificial respiration if indicated. If breathing is difficult, give oxygen. Keep person warm and quiet. Obtain medical attention immediately.

VII - Spill or Leak Protection

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Ventilate area. Contain spill. Soak up spilled material with inert absorbent material and place in a properly marked closed container for proper disposal.

WASTE DISPOSAL METHOD: Consult local environmental authorities.

VIII - Special Protection Information

RESPIRATORY PROTECTION: Use with adequate ventilation. Do not breathe vapors or mists. If recommended Exposure Limits are exceeded wear a NIOSH approved respirator, following manufacturer's recommendations.

VENTILATION

LOCAL: Recommended

MECHANICAL: Recommended

PROTECTIVE GLOVES: Chemical resistant gauntlet type gloves.

EYE PROTECTION: Chemical goggles and/or face shield.

OTHER PROTECTIVE EQUIPMENT: Protective clothing, emergency shower and eye wash station.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Corrosive material. Store in a cool, dry place away from alkaline materials and reactive chemicals. Do not mix with any other cleaning chemicals. Always add this product to water, never add water to this product. Wash thoroughly after handling.

OTHER PRECAUTIONS: Keep out of reach of children.

IX - Transportation Information (ground transportation only)

DOT ID #: UN2922

DOT PROPER SHIPPING NAME: Corrosive Liquids, Toxic, N.O.S. (hydrofluoric acid, sulfuric acid)

DOT CLASS: 8, (6.1)

DOT PACKING GROUP: II

The shipping information listed above applies only to non-bulk (< 119 gallons) containers of this product. This product may have more than one proper shipping name depending on packaging, product properties, & mode of shipment. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may apply.

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