

MATERIAL SAFETY DATA SHEET

West System Inc.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... WEST SYSTEM® 860 Aluminum Etch - Part A.
PRODUCT CODE:..... 860
CHEMICAL FAMILY:..... Not applicable.
CHEMICAL NAME: Not applicable.
FORMULA:..... Not applicable.

MANUFACTURER:

West System Inc.
102 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.com

EMERGENCY TELEPHONE NUMBERS:

Transportation
CHEMTREC:..... 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation
Poison Hotline:..... 800-222-1222

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS Hazard Rating: Health - 2 Flammability - 2 Physical Hazards - 0

DANGER. Corrosive. May cause burns. Severe skin, eye and respiratory irritant. Harmful if absorbed. Harmful if swallowed. Colorless, clear liquid with solvent odor.

PRIMARY ROUTE(S) OF ENTRY: Skin contact and eye contact.

POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION:..... Generation of mist not likely when used under normal application. Mist or concentrated vapors will irritate and may burn mucous membranes if exposure is prolonged.

CHRONIC INHALATION: May cause lung damage.

ACUTE SKIN CONTACT:..... Will irritate and may cause skin burns or other corrosive effects.

CHRONIC SKIN CONTACT:..... Excessive skin absorption may cause hemolysis. Prolonged exposure to excessive concentrations may cause blood, liver, lung and kidney effects.

EYE CONTACT: Will irritate and may cause burns or other corrosive effects.

INGESTION: Will irritate and may burn mucous membranes in digestive tract. Aspiration hazard. Ingestion in large amounts may cause fluoride poisoning. Product contains glycol ethers which has caused blood disorders in animals.

SYMPTOMS OF OVEREXPOSURE:..... Irritation and burning sensation of eyes, skin and respiratory tract. Blood in the urine.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye, skin and respiratory conditions.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS#</u>	<u>CONCENTRATION</u>
Phosphoric acid	7664-38-2	10 - 30%
Ethylene glycol monobutyl ether	111-76-2	10 - 30%
Alkylphenol ethoxylates surfactant	trade secret	1 - 10%
Dihydrogen potassium phosphate	7778-77-0	1 - 10%
Hydrogen fluoride	7664-39-3	0.1 - 1

4. FIRST AID MEASURES

FIRST AID FOR EYES: Immediately flush with water for at least 15 minutes. Get prompt medical attention.

FIRST AID FOR SKIN: Wash with soap and water and rinse thoroughly. If skin burns occur, contact a physician.

FIRST AID FOR INHALATION: Immediately remove to fresh air. Consult a physician if effects occur.

FIRST AID FOR INGESTION: Drink milk of magnesia, aluminum hydroxide gel, or lime water followed by several glasses of water. Do not induce vomiting unless directed by a physician. May be an aspiration hazard.

5. FIRE FIGHTING MEASURES

FLASH POINT: 145°F (TCC)

EXTINGUISHING MEDIA: Water spray, foam, dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Burning will generate toxic fumes, including but not limited to: carbon dioxide and low molecular weight hydrocarbons. May liberate hydrogen fluoride. Wear full-body protective gear and a self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Stop leak without additional risk. Contain spill. Ventilate area. Wear all appropriate personal protective equipment. Transfer any recoverable material to a clean polyethylene container. Neutralize remaining residue with dilute soda ash or lime to a pH of 7 to 8.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (MIN./MAX): 40°F (4°C) / 100°F (37°C)

STORAGE: Store in cool, dry place. Storage should be in a cabinet or area approved for storing acids.

HANDLING PRECAUTIONS: Avoid all skin and eye contact. Use in a ventilated area. Avoid inhalation of vapor or mist.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION GUIDELINES: Chemical splash goggles.

SKIN PROTECTION GUIDELINES: Rubber gloves and rubber apron.

RESPIRATORY/VENTILATION GUIDELINES: Local exhaust ventilation. Use NIOSH/MSHA approved respirator for acid mist/vapor if ventilation is not adequate.

ADDITIONAL PROTECTIVE MEASURES: Use where there is immediate access to safety shower and emergency eyewash. Keep neutralizer in area when using larger quantities. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: Not established for product as whole. Refer to OSHA's Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM Liquid.
COLOR Colorless.
ODOR Slight solvent odor.
BOILING POINT > 212°F.
MELTING POINT/FREEZE POINT Approx. 30°F.
pH 1 to 2.
SOLUBILITY IN WATER Complete.
SPECIFIC GRAVITY 1.13 to 1.15
BULK DENSITY 9.5 pounds/gallon.
VAPOR PRESSURE No data.
VAPOR DENSITY No data.
VOLATILE MATTER CONTENT 1.33 pounds/gallon or 14% by weight.

10. STABILITY AND REACTIVITY

STABILITY: Stable.

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITIES: Alkalis and strong oxidizers.

DECOMPOSITION PRODUCTS: Under decomposition, this product emits carbon dioxide and low molecular weight hydrocarbons. May liberate hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

No specific oral, inhalation or dermal toxicology data is known for this product. Specific ingredient information is listed below.

Ethylene Glycol Monobutyl Ether:

Oral: Rat LD₅₀: 470 mg/kg.
 Inhalation: No information.
 Dermal: Rabbit LD₅₀: 220 mg/kg.

Ethylene glycol monobutyl ether causes harm to the fetus in laboratory animal studies. Harm to the fetus occurs at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Dihydrogen potassium phosphate:

Oral: No information.
 Inhalation: No information.
 Dermal: Rabbit LD₅₀: 4640 mg/kg.

Phosphoric Acid:

Oral: Rat LD₅₀: 1530 mg/kg.
 Inhalation: Rat LC50: > 850 mg/m³/1H.
 Dermal: Rabbit LD₅₀: 2740 mg/kg.

Alkylphenol ethoxylates:

Oral: Rat LD₅₀: 4190 mg/kg.
 Inhalation: No information.
 Dermal: No information.

CARCINOGENICITY:

NTP No.
 IARC No.
 OSHA No.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

12. ECOLOGICAL INFORMATION

No specific data available. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Evaluation of this product using RCRA criteria shows that it is a hazardous waste in its purchased form. It is the responsibility of the user to determine proper disposal methods. Hazardous Waste Code: D002

Neutralized material with plenty of water may be flushed to a local treatment plant with approval of local, state and federal regulations.

14. TRANSPORTATION INFORMATION

DOT

D.O.T. SHIPPING NAME: Corrosive liquid, acidic, inorganic, n.o.s.
 TECHNICAL SHIPPING NAME: Hydrofluoric acid, Phosphoric acid.
 HAZARD CLASS: Class 8
 U.N./N.A. NUMBER: UN3264
 PACKING GROUP: PG II

IATA

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15. REGULATORY INFORMATION

OSHA STATUS: Corrosive; irritant.

TSCA STATUS:..... All components are listed on TSCA Inventory or otherwise comply with TSCA requirements.

Canada WHIMIS Classification: B3, D1B, D2B, E

SARA TITLE III:

SECTION 313 TOXIC CHEMICALS This product contains **ethylene glycol monobutyl ether** and is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

STATE REGULATORY INFORMATION:

The following chemicals are specifically listed or otherwise regulated by individual states. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME	CONCENTRATION	STATE CODE
<u>CAS NUMBER</u>		
Phosphoric acid		
7664-38-2	10-30%	PA, NJ, MA, RI
Ethylene glycol monobutyl ether		
111-76-2	10-30%	PA, NJ, MA, RI
Hydrogen fluoride		
7664-39-3	< 1%	PA, NJ, MA, RI
Trade Secret		¹ CA

¹: These substances are known to the state of California to cause cancer or reproductive harm, or both.

16. OTHER INFORMATION

REASON FOR ISSUE: Changes made in sections: 5,10, 11, 14 & 15.

PREPARED BY:..... G. M. House

APPROVED BY:..... G. M. House

APPROVAL DATE: February 10, 2011

SUPERSEDES DATE:..... January 3, 2008

MSDS NUMBER:..... 860A-11a

Note: The Hazardous Material Indexing System (HMIS), cited in the Emergency Overview of Section 3, uses the following index to assess hazard rating: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; and 4 = Severe.

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