



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: MARYKATE® Aluminex™ Hull & Bottom Cleaner

Product Number (s): MK3132, MK31128

Product Use: Cleaner for aluminum hulls

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luis Potosí, SLP CP 78394

www.crc-mexico.com

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Corrosive to Skin & Eyes.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Appearance & Odor: Thin clear liquid, mild acid odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause severe burns to eyes. May cause permanent eye damage, if not promptly flushed with plenty of water.

SKIN: May cause severe burns to skin. Severity will be based on duration and quantity of exposure.

INHALATION: May cause irritation or burns to mucous membranes and lungs.

INGESTION: May cause severe chemical burns to gastrointestinal system. Effects may not be immediate.

CHRONIC EFFECTS: Unknown

TARGET ORGANS: Unknown

Medical Conditions Aggravated by Exposure: May aggravate existing respiratory conditions.

See Section 11 for toxicology and carcinogenicity information on product ingredients.

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Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Water	7732-18-5	80 - 95
Hydrochloric acid	7647-01-0	4 - 6
Phosphoric acid	7664-38-2	4 - 6
Ammonium bifluoride	1341-49-7	1 - 5
Ethoxylated nonylphenol	9016-45-9	< 2

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Get medical attention. Prompt action may save sight.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do not induce vomiting. Immediately give milk, egg white, antacid, gelatin, or, if none of these are available, give water. Get immediate medical attention.

Note to Physicians: Treat symptomatically.

Section 5: Fire-Fighting Measures

Flammable Properties: As defined by OSHA, this product is nonflammable.

Flash Point:	None	Upper Explosive Limit:	None
Autoignition Temperature:	ND	Lower Explosive Limit:	None

Fire and Explosion Data:

Suitable Extinguishing Media: This material will not burn. Use water, CO2 or dry chemical as appropriate for surrounding fire.

Products of Combustion: Heated material may produce corrosive and irritating fumes.

Explosion Hazards: Containers, when exposed to heat from fire, may build pressure and rupture.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush undiluted product into sewers or storm drains.

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Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Neutralize spilled material with sodium bicarbonate (baking soda) or sodium carbonate (baking powder, soda ash). Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Keep containers closed when not in use. Do not mix with other chemical products. Use appropriate personal protective equipment (see Section 8) to prevent skin and eye contact. Avoid breathing vapors. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Containers should be tightly closed while in storage. Do not store near alkaline materials. Keep out of reach of children.

Aerosol Storage Level: NA

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Water	NE	NE	NE	NE	NE		
Hydrochloric acid	5 (c)	NE	2 (c)	NE	NE		ppm
Phosphoric acid	1	3 (v)	1	3	NE		mg/m ³
Ammonium bifluoride	NE	NE	2.5	NE	NE		mg/m ³
Ethoxylated nonylphenol	NE	NE	NE	NE	NE		
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with acid gas cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as latex or rubber. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

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Section 9: Physical and Chemical Properties

Physical State: liquid
Color: clear
Odor: mild acid odor
Odor Threshold: ND
Specific Gravity: 1.055
Initial Boiling Point: 212°F / 100°C
Freezing Point: ND
Vapor Pressure: 20 mmHg
Vapor Density: ND (air = 1)
Evaporation Rate: slow
Solubility: completely soluble in water
Coefficient of water/oil distribution: ND
pH: 1.0 – 2.5
Volatile Organic Compounds: wt %: 0 g/L: 0 lbs./gal: 0

Section 10: Stability and Reactivity

Stability: Stable
Conditions to Avoid: Elevated temperatures
Incompatible Materials: Will react with alkalines, reducing agents, and reducible organics.
Hazardous Decomposition Products: Acid vapors are liberated when heated.
Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Water	> 90 mL/kg	No data	No data
Hydrochloric acid	No data	No data	3124 ppm/1H
Phosphoric acid	1.25 g/kg	No data	25.5 mg/m ³
Ammonium bifluoride	No data	No data	No data
Ethoxylated nonylphenol	No data	No data	No data

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Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Hydrochloric acid	No	No	No	E (severe) / S & R (mild)	Unknown
Phosphoric acid	No	No	No	E & S (severe)	Unknown
Ammonium bifluoride	No	No	No	E & R (severe)	Unknown
Ethoxylated nonylphenol	No	No	No	Unknown	Unknown
Water	No	No	No	No	No

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: phosphoric acid – 96 Hr LC50 mosquito fish: 138 mg/L
 hydrochloric acid – 48 Hr LC50 bluegill: 3.6 mg/L
 Persistence / Degradability: No information available
 Bioaccumulation / Accumulation: No information available
 Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: This product, as packaged (original concentrated form), is a corrosive hazardous waste with a waste code of D002. Dilutions or mixtures of this product should be tested to determine waste classification. (See 40 CFR Part 261.20 – 261.33)
 Empty containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): **MK3132** Consumer Commodity, ORM-D
 MK31128 Corrosive liquid, toxic, N.O.S. (ammonium bifluoride, phosphoric acid), 8 (6.1), UN2922, PG II
 ICAO/IATA (air): **ALL #'s** Not packaged for shipment by air.
 IMO/IMDG (water): **MK3132** Corrosive liquid, toxic, N.O.S. (ammonium bifluoride, phosphoric acid), 8 (6.1), UN2922, PG II, Limited Quantity
 MK31128 Corrosive liquid, toxic, N.O.S. (ammonium bifluoride, phosphoric acid), 8 (6.1), UN2922, PG II
 Special Provisions: None

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Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: phosphoric acid (5000 lbs)
hydrochloric acid (5000 lbs)
ammonium bifluoride (100 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	No
Reactive Hazard	No
Release of Pressure	No
Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances 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:
None

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): Hydrochloric Acid

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: This product is not regulated.

State Right to Know:

New Jersey: 7647-01-0, 7664-38-2, 1341-49-7
Pennsylvania: 7647-01-0, 7664-38-2, 1341-49-7
Massachusetts: 7647-01-0, 7664-38-2, 1341-49-7
Rhode Island : 7647-01-0, 7664-38-2

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: E

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

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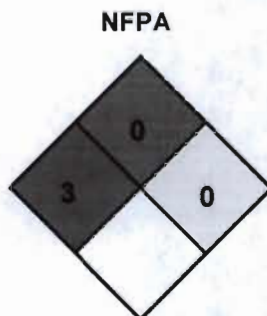
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	3
Flammability:	0
Reactivity:	0
PPE:	C



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: F350-018
Revision Date: 04/04/2011

Changes since last revision: MSDS reformatted to meet the requirements of the Canadian Controlled Products Regulations.

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

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| ACGIH: American Conference of Governmental Industrial Hygienists | NA: Not Applicable |
| CAS: Chemical Abstract Service | ND: Not Determined |
| CFR: Code of Federal Regulations | NIOSH: National Institute of Occupational Safety & Health |
| DOT: Department of Transportation | NFPA: National Fire Protection Association |
| DSL: Domestic Substance List | NTP: National Toxicology Program |
| g/L: grams per Liter | OSHA: Occupational Safety and Health Administration |
| HMIS: Hazardous Materials Identification System | PMCC: Pensky-Martens Closed Cup |
| IARC: International Agency for Research on Cancer | PPE: Personal Protection Equipment |
| IATA: International Air Transport Association | ppm: Parts per Million |
| ICAO: International Civil Aviation Organization | RoHS: Restriction of Hazardous Substances |
| IMDG: International Maritime Dangerous Goods | STEL: Short Term Exposure Limit |
| IMO: International Maritime Organization | TCC: Tag Closed Cup |
| lbs./gal: pounds per gallon | TWA: Time Weighted Average |
| LC: Lethal Concentration | WHMIS: Workplace Hazardous Materials Information System |
| LD: Lethal Dose | |

