



MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet complies with the Canadian Controlled Products Act

****NOTE: THE FOLLOWING INFORMATION PROVIDED IS FOR THE PRODUCT CONCENTRATE ONLY, NOT FOR USE-DILUTIONS****

SECTION 1 – PRODUCT IDENTIFICATION					
PRODUCT IDENTIFIER:		ETCH FREE II			
PRODUCT USE:		ALUMINUM AND STAINLESS STEEL CLEANER			
SUPPLIER:		Velocity Chemicals Ltd. Unit #1, 9515- 190 th St., Surrey, B.C. V4N-3S1 Emergency Telephone: (604) 881-4700 Facsimile: (604) 881-4701		In case of transportation emergency or product spill, contact: In Canada- CANUTEC @ 613-996-6666 (24 hrs.)	
SECTION 2 – HAZARDOUS INGREDIENTS					
HAZARDOUS INGREDIENTS	% (W/W)	CAS NUMBER	LD50	LC50	EXPOSURE LIMITS
Sulfuric Acid	10-30	7664-93-9	2140 mg/kg (oral, rat)	510 mg/m3 (inhal.,2hrs,rat) 160 mg/m3 (inhal.,4hrs,mouse)	OSHA(PEL)= 1mg/m3(TWA) ACGIH = 0.2mg/m3(TWA), 3mg/m3 (STEL)
Phosphoric Acid	1-5	7664-39-3	Not Available	1300ppm (inhal., rat -1hr.) 171ppm (inhal.,4hrs,mouse)	OSHA= 6ppm (STEL), 3ppm(TWA) ACGIH= 0.5ppm(TLV-TWA), 2ppm Ceiling IDLH= 30ppm
SECTION 3 – PHYSICAL DATA					

<p>Physical state: liquid</p> <p>Solubility: soluble</p> <p>Odour and Appearance: clear, colorless, pungent & acrid odor</p> <p>pH (100%) @ 20°C: < 2.0</p> <p>Specific Gravity @ 20°C: 1.1-1.3</p> <p>Odour Threshold (ppm): not determined</p>	<p>Vapour Density: not determined</p> <p>Vapour Pressure: not determined</p> <p>Evaporation Rate: not determined</p> <p>Boiling Point (°C): not determined</p> <p>Freezing Point (°C): not determined</p> <p>Coefficient of water/oil distribution: Greater than 1</p>
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ETCH FREE II

SECTION 4 – FIRE AND EXPLOSION DATA

<p>Flammability: No, product is non-flammable.</p> <p>If yes, under what condition: Not applicable.</p> <p>Means of Extinction: Dry chemical, alcohol foam, CO₂, water spray. The product is not flammable. Use extinguishing media suitable for surrounding fires.</p> <p>Special Fire Fighting Procedures: Wear NIOSH/OSHA approved, self contained breathing apparatus for fire fighting situations. Use water spray to cool all nearby fire exposed surfaces.</p> <p>Explosion Data-</p> <p>Sensitivity to impact: None</p> <p>Sensitivity to static discharge: None</p>	<p>Flash Point (°C) and method: not applicable</p> <p>Upper Flammable limit (% volume): not applicable</p> <p>Lower Flammable limit (% volume): not applicable</p> <p>Autoignition temperature (°C): not applicable</p> <p>Usual Fire Hazards: Prolonged contact with sensitive metals like aluminum can form flammable hydrogen gas.</p> <p>Hazardous combustion products: liberates toxic, corrosive fumes of hydrogen sulfide, carbon/sulfur/ phosphorus oxides.</p>
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SECTION 5 – REACTIVITY DATA

<p>Chemical Stability: yes, stable under normal storage conditions</p> <p>If no, under what conditions:</p> <p>Incompatibility with other substances: yes</p> <p>If so, under what conditions: strong alkalis, strong oxidizers and reducing agents; sensitive metals like aluminum and its alloys.</p> <p>Reactivity, and under what conditions: none known</p> <p>Hazardous Decomposition Products: liberates toxic corrosive fumes of hydrogen sulfide, carbon and sulfur oxides upon thermal decomposition.</p>

SECTION 6 – TOXICOLOGICAL PROPERTIES

Primary route of entry: skin and eye contact, inhalation

Effects of Acute Exposure to Product: Product exposure can cause severe irritation, burns and damage to skin and eyes. Inhaling mist or vapors can cause immediate irritation, burns or discomfort to respiratory system.

Effects of Chronic Exposure to Product: Prolonged exposure can cause skin and eye damage, lung damage or respiratory disorder. Inhaling strong Sulfuric acid mist only can cause cancer.

Exposure Limits: see Section 2 under Hazardous Ingredients

Irritancy of Product: corrosive to skin, eyes and respiratory system.

Sensitization: none known

Reproductive Toxicity: none known

Mutagenicity: none known

Carcinogenicity:

Sulfuric acid (acid mists only)-IARC (Group 1-human carcinogen), ACGIH(A2-suspect human carcinogen)

Teratogenicity: none known

Synergistic Products: none known

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SECTION 7 – PREVENTATIVE MEASURES

Respiratory Protection: Use a NIOSH/OSHA approved for acid mist/dust respirator if mists or vapors are present.

Gloves: butyl, rubber, neoprene or viton

Eye Protection: splash proof chemical goggles or face shield

Footwear: rubber boots

Clothing: rubber apron

Other:

Engineering Controls: General ventilation for normal operating conditions or local exhaust for confined areas.

Leak and Spill Procedures: Wear protective equipment. Contain spill. Prevent runoff to drains or sewers. Recover material by pumping into a suitable waste container. Reuse material if possible, or otherwise neutralize with soda ash before disposal. Dispose in accordance with local regulations.

Waste Disposal: Dispose of in accordance with local environmental regulations.

Handling Procedures and Equipment: Use good hygiene practices. Avoid contact with eyes, on skin or clothing. Avoid inhaling mists or vapors. Safety shower and eye wash station should be available in the immediate work area.

Storage Requirements: Store in a cool, dry place away from incompatibles. Do not mix with any other chemicals. Keep container closed when not in use. Keep from freezing and temperatures below 30°C.

Special Shipping Information:

WHMIS Classification: E

TDG Classification: Corrosive Liquid, N.O.S. (Sulfuric Acid & Phosphoric Acid Mixture), Class 8, UN 1760, P.G. II

SECTION 8 – FIRST AID MEASURES

Inhalation: Remove victim to fresh air, apply artificial respiration if necessary. Seek medical help.
Ingestion: Give large amounts of water if conscious. Do not induce vomiting. Get medical help immediately.
Skin Contact: Wash thoroughly with water for 15 minutes. If irritation persists, seek medical attention.
Eye Contact: Flush immediately with water for 15-20 minutes. Seek medical help.

SECTION 9 - OTHER INFORMATION

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SUPERCEDES: Sept 4, 2008

PREPARED BY: Technical Department (Customer Service phone number: 604-881-4700)

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