

MATERIAL SAFETY DATA SHEET

Richard-Allan Scientific
4481 Campus Drive
Kalamazoo, Michigan 49008
(800) 522-7270 8:00 am to 5:00 pm EST

CHEMTREC (800) 424-9300
24 hours service

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Date of Last Revision: 4-02

SECTION I - PRODUCT IDENTIFICATION

Product Name: **Decalcifying Solution**
8340, 8340-1

Common Synonyms: N/A

Chemical family: N/A

Formula Aqueous Mixture

SECTION II - COMPOSITION AND HAZARDOUS INGREDIENTS INFORMATION (>0.1%)

Hazardous Ingredients	CAS Number	LC50 (Species)	LD50 (Species and Route)
Hydrochloric Acid	7647-01-0	5666 ppm/30 min. (oral rat)	900 mg/kg oral rat
Water	7732-18-5	N/A	N/A

SECTION III - PHYSICAL DATA

Physical State	Odor and Appearance			Odor Threshold (ppm)
Liquid	Colorless liquid with a slight odor			1 – 5 ppm (detection) 10 ppm (irritation)
Vapor Pressure	Vapor Density	Evaporation Rate	Boiling Point	Freezing Point
Equivalent to water	Equivalent to water	Equivalent to water	214° –217° F	Equivalent to water
PH	Specific Gravity	Coeff. Water/oil Dist.		
1.25	1.017	-1.04		

SECTION IV – FIRE AND EXPLOSION DATA

Flammability Yes No b		If yes, under which conditions?	N/A
Means of Extinction Dry chemical, carbon dioxide, water spray or regular foam (1993 Emergency Response Guidebook, Dot (P 5800.5) For larger fires, use water spray, fog or regular foam (1993 Emergency Response Guidebook, Dot P 5800.5)			
Flashpoint and Method N/A		Upper Flammable Limit (% by vol.) N/A	Lower Flammable Limit N/A
Autoignition Temperature N/A		Hazardous Combustion Products Toxic and corrosive gas and vapor (hydrogen chloride).	
Explosion Data No	Sensitivity to Impact No	Sensitivity to Static Charge No	

SECTION V – REACTIVITY DATA

Chemical Stability Yes b No	If no, under which conditions?
Incompatibility with other substances Yes b No If so, which ones? VAPOR OR LIQUID WITH ANY ALKALI OR ACTIVE METAL: May develop enough heat to cause fire in adjacent combustible material. ALDEHYDES, EPOXIDES: May cause violent polymerization, generating heat and pressure. REDUCING AGENTS, ACETYLIDES, BORIDES, CARBIDES, SILICIDES, SULPHIDES OR CYANDIES: Produces heat flammable and/or corrosive gases. METALS: Corrodes them and forms flammable hydrogen gas. OXIDIZERS: (STRONG): Incompatible	
Reactivity and under what conditions See incompatibility	
Hazardous decomposition products Toxic and corrosive gas and vapor may be released by decomposition. When reacting with metals, the material may give off flammable hydrogen gas.	

SECTION VI – TOXICOLOGICAL PROPERTIES

Skin Contact – Corrosive. May cause irritation and dermatitis. May cause severe burns, blisters.			
Skin Absorption – May be harmful if absorbed by the skin, however, effects are not known.			
Eye Contact – Causes irritation, severe burns, watering, conjunctivitis leading to permanent damage, possible blindness.			
Inhalation – May cause irritation of the mucous membranes and respiratory tract.			
Ingestion – Severe burns to mouth, throat, esophagus and stomach. Risk of stomach perforation, convulsions, coma and death.			
Effects of Acute Exposure Inhalation exposure symptoms may be delayed for several hours after exposure.			
Effects of Chronic Exposure Repeated or prolonged exposure to acid fumes may cause headaches, dizziness and weakness. Bronchial irritation with chronic coughing may also occur.			
Exposure Limits	PEL	STEL	Agency
HCl	5.0ppm	N/A	OSHA, ACGIH
Irritancy – Irritating to the eyes, nose, throat, skin and upper respiratory system			
Sensitization – Insufficient information			
Carcinogenicity – No			
Teratogenicity – No			
Reproductive Toxicity – Insufficient information			
Mutagenicity – Insufficient information			
Synergistic – Insufficient information			

SECTION VII – PREVENTIVE MEASURES

Gloves Chemical resistant gloves	Respirator Not required under normal conditions of use.	Eye Protection Chemical splash goggles, or at a minimum, safety glasses with side shields
Footwear N/A	Clothing Laboratory coat, if splashing on arms may occur use chemical resistant sleeve protectors	Other Eyewash and safety shower in work area.
Engineering Controls Ventilation – General mechanical ventilation or fume hood		
Leak and Spill Procedure For small spills, take up with sand or other absorbent material and place into sealed containers for disposal.		
Waste Disposal Dispose of unused or spent product in accordance with local, state and federal regulations. The information offered herein is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the classification and the proper disposal method. RCRA regulated (D002) corrosive		
Handling Procedures and Equipment General handling: Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing mist or vapor. Use only with adequate ventilation. Wash thoroughly after handling. Since empty containers retain product residue, assume emptied containers to have the same hazard qualities as full containers.		
Storage Requirements Containers should be stored in an upright position to prevent leakage. Store in a well ventilated area, away from sources of ignition and heat. Store at room temperature Keep away from incompatible materials.		

SECTION VIII – FIRST AID MEASURES

<p>Specific Measures</p> <p>Eye Contact – Immediately flush eyes with plenty of water for at least 30 minutes. Get medical attention immediately.</p> <p>Skin Contact – Remove contaminated clothing immediately. Wash the affected area of your body with soap or mild detergent and large amounts of water for at least 15 minutes.</p> <p>Inhalation – Move individual to fresh air immediately. If breathing is difficult, give oxygen. If breathing has stopped, administer artificial respiration. Call a physician.</p> <p>Ingestion – Do not induce vomiting. Rinse mouth thoroughly; give 2 cups of water or milk to dilute the material. Never give anything by mouth to an unconscious person. Call a physician immediately.</p>
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SECTION IX – REGULATORY INFORMATION

Ingredient	Hazardous OSHA	California Proposition 65	SARA Title III		CERCLA	
			302 / 304	313	102(A)	RQ
Hydrochloric Acid	Yes	No	Listed	Listed	Listed	5000 lbs

Product	NFPA Rating	Canadian WHMIS Proposed	RCRA Regulated
Decalcifying Solution	3, 0, 0	N/A	Yes D002

Proper USDOT Shipping Name	Hazard Class	UN/NA	Packing Group	Limited Quantity
Hydrochloric acid solutions	8	1789	II	No

SECTION X – DATE PREPARED

Prepared By	Phone Number	Date
Richard-Allan Scientific Regulatory Affairs Department	1-800-522-7270	April, 2002