

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (as Used on Label and List)
SILVERCHEM ETCH
549-76
AQUEOUS MIXTURE

NFPA RATING:
HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0

Section I

Manufacturer's name	Emergency Telephone Number (617)445-5335
Address (Number, Street, City, State and ZIP Code)	Telephone Number for Information (617)445-5335
SOLUTEK CORPORATION	Date Prepared 3/5/96
94 SHIRLEY STREET BOSTON, MA 02119	Signature of Preparer (optional) DIRECTOR OF RESEARCH

Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
ETHYLENE GLYCOL 107-21-1	50 PPM	50 PPM	N/A	<50

Section III—Physical/Chemical Characteristics

Boiling Point OVER 100°C	Specific Gravity (H ₂ O = 1) 1.06
Vapor Pressure (mm Hg)	Melting Point
Vapor Density (AIR = 1)	Evaporation Rate (Butyl Acetate = 1)
Solubility in Water 100%	
Appearance and Odor ODORLESS, COLORLESS CLEAR LIQUID	

Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used) NONE	Flammable Limits	LEL NONE	UEL NONE
Extinguishing Media USE EXTINGUISHING MEDIA APPLICABLE TO THE PRIMARY CAUSE OF THE FIRE.			
Special Fire Fighting Procedures EVACUATE PERSONNEL TO A SAFE AREA REMOVED AND UPWIND OF THE FIRE. FIRE OF EXCESSIVE HEAT MIGHT CAUSE A PRODUCTION OF HAZARDOUS DECOMPOSITION PRODUCTS.			
Unusual Fire and Explosion Hazards THIS PRODUCT IS NON-COMBUSTIBLE.			

(Reproduce locally)

OSHA 174 Sept. 1985

Section V—Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable X		

Incompatibility (*Materials to Avoid*) STRONG ACIDS AND BASES AT ELEVATED TEMPERATURES. STRONG OXIDIZING AGENTS.

Hazardous Decomposition or Byproducts CARBON DIOXIDE AND/OR CARBON MONOXIDE.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur X		

Section VI—Health Hazard Data

Route(s) of Entry	Inhalation?	Skin?	Ingestion?
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Health Hazards (*Acute and Chronic*) CAUSES EYE AND SKIN IRRITATION. INHALATION OF MIST OR DRIED RESIDUE CAN IRRITATE THE RESPIRATORY TRACT. INGESTION MAY CAUSE ABDOMINAL DISCOMFORT OR PAIN, NAUSEA, VOMITING, DIZZINESS, DROWSINESS, MALAISE, BLURRING OF VISION, IRRITABILITY, LUMBAR PAIN, OLIGURIA, UREMIA, AND CENTRAL NERVOUS SYSTEM EFFECTS, INCLUDING IRREGULAR EYE MOVEMENTS, CONVULSIONS AND COMA. CARDIAC FAILURE AND PULMONARY EDEMA MAY DEVELOP. SEVERE KIDNEY DAMAGE FOLLOWS THE SWALLOWING OF LARGE VOLUMES OF ETHYLENE GLYCOL. MAY BE FATAL. A FEW REPORTS HAVE BEEN PUBLISHED DESCRIBING THE DEVELOPMENT OF WEAKNESS OF THE FACIAL MUSCLES, DIMINISHED HEARING, AND DIFFICULTY WITH SWALLOWING DURING THE LATE STAGES OF ETHYLENE GLYCOL POISONING.

Carcinogenicity	NTP? NONE	IARC Monographs? NONE	OSHA Regulated? NONE
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Signs and Symptoms of Exposure IRRITATION OF EYES, SKIN, RESPIRATORY TRACT OR MUCOUS MEMBRANE. DERMATITIS, COUGHING, NAUSEA, DIZZINESS, HEADACHES.

Medical Conditions
Generally Aggravated by Exposure

Emergency and First Aid Procedures IF INHALED REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GIVE OXYGEN IF BREATHING IS DIFFICULT. CALL A PHYSICIAN. SKIN: FLUSH SKIN WITH COPIOUS AMOUNT OF WATER. EYE: FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN. INGESTION: IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. VOMITING SHOULD NORMALLY BE INITIATED ONLY ON THEIR ADVICE AND BY THE MEANS THEY SPECIFY.

Section VII—Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled CONTAIN THE SPILL. NEUTRALIZE WITH SODIUM BICARBONATE. IF LOCAL EFFLUENT LAWS PERMIT, FLUSH TO SEWER WITH LARGE AMOUNTS OF WATER.

Waste Disposal Method IF PERMITTED, FLUSH TO SEWER WITH LARGE AMOUNTS OF WATER. PRETREATMENT MIGHT BE REQUIRED. OR, DISPOSE OF IN AN APPROVED AND PERMITTED BIOLOGICAL TREATMENT SYSTEM OR AN APPROVED AND PERMITTED DEEPWELL OR LANDFILL

Precautions to Be Taken in Handling and Storing KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT STORE OR CONSUME FOOD, DRINKS, OR TOBACCO IN AREAS WHERE THEY MIGHT BE CONTAMINATED BY THIS PRODUCT. AVOID STORAGE OR CONTACT WITH STRONG ACIDS.

Other Precautions

Section VII—Control Measures

Respiratory Protection (*Specify Type*)

Ventilation	Local Exhaust 10 ROOM VOLUMES PER HOUR	Special
	Mechanical (<i>General</i>)	Other

Protective Gloves RUBBER OR PLASTIC GLOVES	Eye Protection CHEMICAL SPLASH GOGGLE
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Other Protective Clothing or Equipment

Work/Hygienic Practices
