

## MATERIAL SAFETY DATA SHEET

WHMIS STATUS: Controlled D2B

Date Prepared: 09-01-01 By Charles D. Werner (206) 762-7000

**SECTION 1 - PRODUCT IDENTIFICATION**

Manufacturer Name: Fortech Products by Formula Corporation	Emergency Phone No: 1-800-228-5635 ext. 059
Address: 7901 2nd Ave S., Seattle, WA 98108	
Trade Name: WATER STAIN REMOVER	Product Type/Use: Ammonium Bifluoride stain remover
PRODUCT CODE: FLCSRFXX	Formula:

**SECTION 2 - HAZARDOUS INGREDIENTS**

Chemical Name/Common Name:	CAS NO.	PERCENT (optional)	TLV/PEL
Ammonium Hydrogen Fluoride LD 50 300 mg/kg Oral (Rat) LC 50 N/A	1341-49-7	8	25 PPM OSHA (Inhalation)
No chemicals subject to the reporting requirements of section 313 of title III and of 40 CFR 372 are present			

**SECTION 3 - PHYSICAL DATA**

Boiling Point: (F) approx. 212 F (100 C) Freezing Point 32 F (0 C)	Specific Gravity: (H <sub>2</sub> O = 1.0) 1.05	pH: 2.0-4.0
Vapor Pressure: (mm/Hg) 18	Vapor Density: Heavier than air	
Solubility In Water: Completely miscible	Coefficient of water/oil: Not available	
Evaporation Rate (Vs ether) slower than ether		
Appearance and Odor: Water white, non-viscous liquid, faint odor.	Odor threshold: Not available	

**SECTION 4 - FIRE AND EXPLOSION HAZARD DATA**

Flash Point (T.C.C.): NONE	Flammable Limits	Upper N/A	Lower N/A
Extinguishing Media: water Fog.			
Special Fire Fighting Procedures: Fire fighters should wear self-contained breathing apparatus and full protective clothing. Use Water spray to cool nearby containers and structures exposed to fire.			
Unusual Fire and Explosion Hazards: Not a fire or explosion hazard. However, toxic and corrosive fluoride compounds may be released in a fire situation.			

**SECTION 5 - REACTIVE DATA**

Stability: Stable	Incompatibility: Strong acids, alkali's, chlorine, cyanides, sulfides.
Hazardous Decomposition Products: May liberate hydrogen fluoride, ammonia and sulfur oxides. Will form hydrofluoric acid on contact with strong acids; ammonia on contact with alkali's.	

**SECTION 6 - HEALTH HAZARDS**

Threshold Limit Value - Product (See Section 2 for Ingredient TLV/PEL)		None Established			
Primary Routes of Exposure:	Eye - yes	Skin-Not Established	Oral-yes	Inhalation-yes	Other
Signs and Symptoms of Over-exposure (Acute): EYES: Vapors and mists causes burns to the eyes. INHALATION: Undiluted vapors and mists are corrosive to the nose, throat, and mucous membranes. Irritation, coughing, chest pain, and breathing difficulty may occur with brief exposure while prolonged exposure will result in more severe irritation. SKIN: Redness, drying of skin or other signs of irritation and fluoride-like burns which may not be immediately evident.					
Signs and Symptoms of Over-exposure (Chronic): Exposure to FLUORIDES over years may produce embrittlement and decalcification of bones, and increased calcification of ligaments and vertebrae resulting in spinal stiffness (fluorosis).					
Medical Conditions Aggravated by Over-exposure: Persons with pre-existing skin disorders, eye problems, impaired respiratory function may be more susceptible.					
Carcinogen or Suspect Carcinogen Ingredients:	NTP - NO	IARC - NO	OSHA - NO	NONE	

**SECTION 7 - EMERGENCY AND FIRST AID PROCEDURES**

Eyes: Flush with immediately with lots of running water for at least 15 minutes holding eyelids open. GET MEDICAL ATTENTION IMMEDIATELY.
Skin: Flush with water for at least 15 minutes. Remove contaminated clothing & shoes. Wash before reuse.
Ingestion: If conscious, drink 1 to 8 glasses of water or milk to dilute. DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION IMMEDIATELY. Treat symptomatically. Don not give anything by mouth to an unconscious or convulsing person.
Inhalation: Get to fresh air. Give artificial respiration if not breathing.

**SECTION 8 - SPECIAL PROTECTION INFORMATION**

Respiratory Protection: not normally required	Ventilation Requirements: Adequate ventilation required. Mechanical required if necessary to maintain exposure below TLV/PEL.
Protective Gloves: Wearing resistant gloves is required.	Eye Protection: Recommended. Required if used overhead or misting or spraying.
Other Protective Clothing: Where gross eye and skin contact may occur use and wear appropriate protective clothing, including resistant clothing, rubber boots with pants on the outside, and rubber gloves.	

**SECTION 9 - SPILL OR LEAK PROCEDURES**

Steps to be Taken if Released or Spilled: For small spills, dilute with water and-rinse down sanitary sewer. For large spills, contain by diking with absorbent material and carefully neutralize with lime or sodium carbonate. When neutralized, rinse with water into sanitary sewer system..
Waste Disposal Methods: Note that the contaminates of the product must be considered when disposing. Consult appropriate Federal, State and Local regulatory agencies to ascertain proper disposal procedures and comply with them.

**SECTION 10 - STORAGE AND HANDLING INFORMATION**

Precautions to be Taken in Handling and Storage: Store in a cool dry, well ventilated place away from incompatible materials.
Keep container tightly closed when not in use.
Other Precautions: Empty containers will retain product residue and vapors. Always obey hazard warnings and handle empty containers as if they were full. When mixing with water, always add this product slowly to water and stir. This product is a class 8 CORROSIVE for transportation and storage according to DOT regulations.