

# MATERIAL SAFETY DATA SHEET

Date of Revision: January 2006

## SECTION I - PRODUCT IDENTIFICATION

Manufactured by: **VentureTECH Corporation**  
10720 Lexington Drive  
Knoxville, TN 37932

Information Phone: (865) 966-2532  
Emergency Phone: (865) 544-9400

Chemical Name:  
Trade Name: **Formula 4000**  
Chemical Family: Acidic  
Formula: Proprietary Blend of Acids  
and special Detergents

! NFPA Hazard Ratings: Health - 3  
! none -> extreme Fire - 0  
! 0 ----> 4 Reactivity - 2  
! Special Hazard Warning -  
! Personal Protection -

## SECTION II - HAZARDOUS INGREDIENTS

Principal Hazardous Compound:	Percent:	CAS No:	TLV:
Hydrofluoric Acid	0-10%	7664-39-3	
Sulfuric Acid	0-5%	7664-93-9	

## SECTION III - PHYSICAL DATA

Appearance & Odor: Clear Liquid	Boiling Range: N/A
Percent Volatile by Volume: Non-Volatile	Evaporation Rate: Non-Volatile
Specific Gravity: 1.06	Vapor Density:
Wt. per Gallon: 8.8-8.9	Solubility in Water: Complete
pH: <1.5	

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: Non-Combustible      Flash Point: None,      LEL:      UEL:

### Extinguishing Media:

Non-Volatile. Fight source of fire with water spray, carbon dioxide, chemical foam, dry chemical as required by surrounding fire.

### Special Fire fighting Procedures:

If this material is involved in a fire, NIOSH approved self-contained breathing apparatus should be worn. Thermal decomposition emits toxic fumes of oxides of Sulfur.

### Unusual Fire & Explosion Hazards:

Hydrofluoric acid corrodes most metals releasing flammable and explosive concentrations of Hydrogen.

## SECTION V - HEALTH HAZARD DATA

### Permissible Exposure Level:

Not Established

### Effects of Overexposure:

PRIMARY ROUTES OF ENTRY:

( X ) Skin Contact ( X ) Eye Contact ( X ) Inhalation ( ) Ingestion

SIGNS AND SYMPTOMS OF EXPOSURE:

**ACUTE:** Both liquid and vapor causes severe burns which may not be immediately painful or visible.

Irritating/dangerous to eyes, skin, and respiratory tract. Corrosive to gastrointestinal tract. Lung injury may be delayed

**CHRONIC:** Chemical burns likely to exposed tissues - Excessive deposition of fluoride in bone.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Causes eye burns on contact.

**CARCINOGENICITY:** ( ) OSHA ( ) NTP ( ) IARC

**EMERGENCY PROCEDURES:**      **FIRST AID:**

**Inhalation:** Remove from further exposure to fresh air. Administer oxygen. Support respiration if needed.

Consult physician if symptoms persist.

**Skin Contact:** Remove contaminated clothing and wash contaminated areas with plenty of water for up to 2 hours or until medical attention is obtained. Pay particular attention to skin under nails. Always have on hand a supply of magnesia paste - magnesium oxide to apply to contaminated skin areas.

Eye Contact: Flush eyes immediately with large quantities of water for 30 minutes, lifting the eyelids occasionally. Get medical attention immediately.

Ingestion: Do not induce vomiting. Give large quantities of milk or water. Consult physician if symptoms persist.

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## SECTION VI - REACTIVITY DATA

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### Stability:

( X ) Stable ( ) Unstable

### Incompatibility:

Bases, Metals such as mild steel and aluminum.

### Conditions to Avoid:

Reaction of materials with metal can liberate flammable/explosive Hydrogen.

### Hazardous Decomposition Products:

Oxides of HF and SO<sub>2</sub> vapors. Do not breathe vapor. Keep personnel upwind of spill and do not enter area unless equipped with full protective equipment and self-contained breathing apparatus.

### Hazardous Polymerization:

( X ) Will not occur, ( ) May occur

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## SECTION VII SPILL OR LEAK PROCEDURES

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### Steps To Be Taken in Case Material is Released or Spilled:

Confine as much as possible. Dike and absorb with inert material such as Oil dry or Vermiculite. Neutralize with hydrated lime or soda ash. Transfer to containers for disposal. Small spills can be mopped up. Flush contaminated area with plenty of water. Avoid wash water entering natural waterways or public water supplies.

### Waste Disposal Method:

Dispose of waste in accordance with Federal, State, and local ordinances.

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## SECTION VIII - SPECIAL PROTECTION INFORMATION

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### Respiratory Protection:

Recommended, Not required

### Ventilation:

Exhaust systems should be located adjacent to work area. Good room ventilation usually adequate for most operations.

### Protective Gloves:

Impervious rubber or neoprene gloves recommended.

### Eye Protection:

Chemical type goggles or face shield recommended. Have clean rinse water available in work area.

### Other Protective Equipment:

Wear appropriate protective clothing to prevent contact with product.

Wash hands thoroughly after use.

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## SECTION IX - SPECIAL PRECAUTIONS

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### Precautions To Be Taken in Handling and Storing:

Empty containers should be reconditioned by certified firms. Disposal of empty containers should be in accordance with applicable laws and regulations. Store in a cool, dry place. Keep container closed. Keep out of reach of children.

### Other Precautions:

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**FORMULA 4000**