



MATERIAL SAFETY DATA SHEET

IDENTITY: TRIFLUOROACETIC ACID

SECTION I: MANUFACTURER

HALOCARBON PRODUCTS CORPORATION      Emergency Number:                    (803) 278 3504  
P.O. Box 661                                    Customer Service & Sales:    (201) 262 8899  
River Edge, NJ 07661

Prepared by: Dr. Lee G. Sprague  
Reviewed by: Dr. Neville P. Pavri

SECTION II: CHEMICAL IDENTITY

Components	CAS No.	OSHA PEL	ACGIH TLV	Other Limits
Trifluoroacetic Acid (100%)	76-05-1	None	None	None

OSHA HAZARD RATING:

This product contains the following toxic chemical(s) subject to Section 313 Title III reporting requirements (40 CFR Part 372).

None

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : 72 C                                    Vapor Pressure: 107 mm Hg (25 C)  
Melting Point : -15C                                    Vapor Density(Air=1): Not Determined  
Specific Gravity(H2O=1): 1.48                        Solubility in Water : Miscible

Appearance and Odor: Colorless liquid with strong vinegar odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point/Method: None                            Autoignition Temp: Not determined  
Flammability Limits in Air - LEL: N/A            UEL: N/A

Extinguishing Media: Non-flammable. Use methods appropriate for surroundings.

Special Fire Fighting Procedures: Firefighters should wear self-contained breathing apparatus and protective clothing to prevent skin and eye contact.

Unusual Fire and Explosion Hazards: Emits toxic and corrosive fumes under fire conditions. These fumes contain carbonyl halides and halogen acids.

=====

SECTION V - REACTIVITY DATA

Unstable  Conditions to Avoid: Reacts violently with alkaline or  
Stable  basic compounds. Considerable heat  
is released on mixing with water.

Incompatibility (Materials to Avoid): Will react exothermically with  
alcohols & epoxides. Corrodes steel  
and aluminum.

Hazardous Decomposition or By-products: N/A

Hazardous Polymerization  May Occur  Will Not Occur  
Conditions To Avoid: N/A



=====

SECTION VI - HEALTH HAZARD DATA

RTECS Number is AJ625000

While the toxicity of trifluoroacetic acid is low, contact with the skin causes immediate burns. The acid diffuses into skin and destroys tissue as it penetrates. Acid fumes are also irritating. Wash any affected area for at least 15 minutes and treat as third degree burn even though appearance may not indicate severity of skin damage. Subcutaneous injections of calcium gluconate are not indicated. Unlike the monofluoroacetate ion, the trifluoroacetate ion is not toxic.

Toxicity data for trifluoroacetic acid.

Animal	Route	Dose
Rat	Oral	LD(10) 500mg/kg
Rat	Inhalation	LC(50) 10mg/l (10g/m3)
Mouse	Inhalation	LC(50) 13.5mg/l (13.5g/m3)
Mouse	Intraperitoneal	LD(10) 150 mg/kg
Mouse	Intravenous	LD(50) 1.2g/kg

In a one hour acute inhalation study of trifluoroacetic acid in rats, all animals exposed to 6.57 mg/L (1440 ppm) survived with no gross pathological findings.

Primary routes of entry:  Inhalation  Skin  Eyes  Oral

Acute Effects of Overexposure: Unknown except for the destruction of tissue on skin contact.

Chronic Effects of overexposure: Unknown

Carcinogenicity listing:  [No ] NTP  [No ] IARC  [No ] OSHA  
 [No ] Other:

First Aid

Inhalation: Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen and consult a physician.

Skin: Wash immediately with copious amounts of water. Treat as third degree burn.

Eye: Flush eyes with water for at least 15 minutes. Consult a physician.

Oral: Give water and Milk of Magnesia to drink. Do not induce vomiting. Seek medical help.

Medical Conditions Generally Aggravated by Exposure: Unknown

Other Health Hazards: None known



=====  
SECTION VII - PROTECTION INFORMATION

Respiratory: Self-contained breathing apparatus for emergency use.

Ventilation: Good general and local ventilation.

Eye and Face: Safety glasses or goggles, and face shield.

Gloves: Impervious gloves (neoprene).

Other equipment: Wear rubber apron where danger of splashing occurs. Provide eye wash and safety shower facilities. Acid jacket and pants should be worn when connecting, disconnecting or sampling trifluoroacetic acid bulk containers.

=====  
SECTION VIII - SPILL, LEAK AND DISPOSAL PROCEDURES

Spill, Leak, or Release: Avoid breathing vapors. Wash spill with copious amounts of water (heat is released!). Neutralize the aqueous solution with caustic soda when possible.

Waste Disposal: Small amounts may be reacted carefully with caustic soda to give sodium trifluoroacetate and salt. Observe all federal, state and local regulations.

=====  
SECTION IX - OTHER INFORMATION

1. Hazardous Materials/Dangerous Goods Shipping Regulations

U.S. (49 CFR): Proper Shipping Name: Trifluoroacetic Acid  
Hazard Class: 8; ID No.: UN 2699  
Packaging Group: I

IATA: Proper Shipping Name: Trifluoroacetic Acid  
Hazard Class: 8; ID No.: UN 2699  
Packaging Group: I

IMDG: Proper Shipping Name: Trifluoroacetic Acid  
Hazard Class: 8; ID No.: UN 2699  
Packaging Group: I

Other Information: HMIS Labeling: H 3; F 0; R 1; P D

=====  
REVISED: JANUARY 18, 2005