Section 1. Product and Company Identification

Product Name Trifluoroacetic Anhydride
CAS Number 407-25-0

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
(914) 654-6800 **(914) 654-6899**
parchem.com **info@parchem.com**

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture
WHMIS Classification
D2B: Toxic Material Causing Other Toxic Effects: Moderate eye irritant
E: Corrosive Material: Corrosive

GHS Classification
Acute toxicity, Inhalation: (Category 4)
Skin corrosion: (Category 1A)
Serious eye damage: (Category 1)
Acute aquatic toxicity: (Category 3)

GHS Label Elements
Pictograms:

Signal word: DANGER

Hazard and precautionary statements
Hazard statements
H314: Causes severe skin burns and eye damage.
H332: Harmful if inhaled.
H402: Harmful to aquatic life.

Precautionary statements
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.

HMIS Classification
Health hazard: 3*
Flammability: 0
Physical hazards: 0
Reactivity: 2

Potential Health Effects
Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin: May be harmful if absorbed through skin. Causes skin burns.
Eyes: Causes eye burns. Causes severe eye burns.
Ingestion: May be harmful if swallowed

Target Organs: Liver

Section 3. Composition / Information on Ingredients

Common Name	Trifluoroacetic Anhydride
Synonym(s)	TFAA
Formula	$C_4F_6O_3$
CAS Number	407-25-0

Section 4. First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Firefighting Measures

Conditions of flammability: Not flammable or combustible.
Suitable extinguishing media: Dry powder
Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen fluoride
Explosion data – sensitivity to mechanical impact: No data available
Explosion data – sensitivity to static discharge: No data available

Section 6. Accidental Release Measures

Personal precautions: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Never allow product to get in contact with water during storage.

Section 8. Exposure Controls / Personal Protection

Exposure Controls: Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands construed as offering an approval for any specific use scenario.
Eye protection: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin and body protection: Complete suit protecting against chemicals, Flame retardant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Specific engineering controls: Use mechanical exhaust or laboratory fume hood to avoid exposure

Section 9. Physical and Chemical Properties

Appearance: Colorless liquid
pH: No data available
Melting point/freezing point: -65°C (-85°F) - lit.
Boiling point: 39.5 – 40°C (103.1 – 104°F) - lit.
Flash point: No data available
Ignition temperature: No data available
Auto-ignition temperature: No data available
Lower explosion limit: No data available
Upper explosion limit: No data available
Vapor pressure: 432.9 hPa (324.7 mmHg) at 20°C (68°F); 1,831.4 hPa (1,373.7 mmHg) at 55°C (131°F)
Density: 1.511 g/cm^3 at 20°C (68°F)
Water solubility: No data available
Partition coefficient (n-Octanol/Water): No data available
Relative vapor density: No data available
Odor: No data available
Odor Threshold: No data available
Evaporation rate: No data available

Section 10. Stability and Reactivity

Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: Reacts violently with water.

Conditions to avoid: Exposure to moisture.
Materials to avoid: Strong oxidizing agents, Strong acids, Strong bases, Alcohols

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: - Carbon oxides, Hydrogen fluoride
Other decomposition products: No data available

Section 11. Toxicological Information

Acute toxicity
Oral LD50: No data available

Inhalation LC50: No data available
Dermal LD50: No data available
Other information on acute toxicity: No data available

Skin corrosion/irritation: Skin - rabbit - Severe skin irritation - 24 h
Serious eye damage/eye irritation: Eyes - rabbit - Severe eye irritation - 24 h
Respiratory or skin sensitization: No data available
Germ cell mutagenicity: No data available

Carcinogenicity
IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity: No data available
Teratogenicity: No data available
Specific target organ toxicity – single exposure (Globally Harmonized System): No data available
Specific target organ toxicity – repeated exposure (Globally Harmonized System): No data available
Aspiration hazard: No data available

Potential health effects
Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.
Skin: May be harmful if absorbed through skin. Causes skin burns.
Eyes: Causes eye burns. Causes severe eye burns.

Signs and Symptoms of Exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Cough, Shortness of breath, Headache, Nausea
Synergistic effects: No data available

Additional Information
RTECS: AJ9800000

Section 12. Ecological Information

Toxicity: No data available

Persistence and degradability: No data available
Bioaccumulative potential: No data available

Mobility in soil: No data available
PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT (US)
UN number: 3265
Class: 8
Packing group: I
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Trifluoroacetic anhydride)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 3265
Class: 8
Packing group: I
EMS-No: F-A, S-B
Proper shipping name: Corrosive Liquid, Acidic, Organic, N.O.S. (Trifluoroacetic anhydride)
Marine pollutant: No

IATA
UN number: 3265
Class: 8
Packing group: I
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Trifluoroacetic anhydride)

Section 15. Regulatory Information

WHMIS Classification
D2B: Toxic Material Causing Other Toxic Effects: Moderate eye irritant
E: Corrosive Material: Corrosive

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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