
1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Trifluoroacetic Acid
Synonyms	TFA
Grade	ACS, HPLC, Anapremium, Dehydrous, LCMS, UPLC, Trace metal, Trace metal Plus
Company	Anaqua Chemicals Supply 1510 Eldridge Parkway, Suite 110-268 Houston, TX 77077, USA
Telephone	(281) 668-0032
Fax	(281) 668-0033

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Formula	C ₂ HF ₃ O ₂
CAS-No.	76-05-1
Index-No.	607-091-00-1
Ec-No.	200-929-3

3. HAZARDS IDENTIFICATION

GHS Classification

Chronic aquatic toxicity	Category 3
Acute toxicity, Inhalation	Category 4
Skin corrosion	Category 1A

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Causes severe burns. Harmful by inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

4. FIRST AID MEASURES

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation	If breathed in, move to fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Rinse mouth with water. Consult a physician immediately.
Skin Contact	Immediately wash off with plenty of water for at least 15 minutes. Consult a physician.
Eye Contact	Rinse through with plenty of water for at least 15 minutes. Consult a physician.
Note to Physician	Treat symptomatically

Most important symptoms and effects, both acute and delayed

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Special hazards	Carbon oxides, Hydrogen fluoride
Special protective equipment	Wear self contained breathing apparatus for fighting if necessary.

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
Methods for cleaning up	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.
Storage	Store in cool place. 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.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Occupational exposure controls

Engineering Measures	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
----------------------	--

Personal protective Equipment

Respiratory protection	Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup
Hand protection	Wear appropriate protective gloves.
Eye protection	Tightly fitting safety glasses.
Skin and body protection	Complete suit protecting against chemicals. Protective clothes should be selected specifically for work place according to concentration and quantity of chemical handled.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and at the end of working day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Color	Colourless
pH	1.0 at 1.00000 g/l at 20 °C
Oxidizing properties	No data available
Melting point	-15.4 °C
Boiling point	72 °C
Flash point	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Partition coefficient: noctanol/ water	log Pow: -2.10
Density	1,664 g/cm ³ at 25 °C
Vapour pressure	130.0 hPa at 20.0 °C 142.7 hPa at 25.0 °C
Water solubility	Soluble
Relative density	1,48 g/cm ³

10. STABILITY AND REACTIVITY

Storage stability	No information available
Conditions to avoid	No information available
Materials to avoid	Strong bases, Metals, Oxidizing agents, Alcohols, Epoxides, Steel (all types and surface treatments), Aluminum, Exothermic in contact with water, Reacts violently with:, Alkali metal
Hazardous decomposition products	No information available

11. TOXICOLOGICAL INFORMATION

Acute toxicity	LC50 Inhalation - rat - 10.000 mg/m ³ Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Conjunctive irritation. Behavioral:S omnolence (general depressed activity). Lungs, Thorax, or Respiration: Dyspnea.
Skin irritation	No information available
Carcinogenicity	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
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 Harmful if swallowed. Causes burns. Skin May be harmful if absorbed through skin. Causes skin burns. Eyes Causes eye burns.tal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Symptoms of Exposure	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and

skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

Additional Information RTECS: AJ9625000

12. ECOLOGICAL INFORMATION

Persistence and degradability	No information available
Ecotoxicity	No information available
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 55,00 mg/l - 24 h
Bioaccumulative potential	No information available
Other adverse effects	Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material
Packaging	Dispose of as unused product.

14. TRANSPORT INFORMATION

IATA

UN-Number: 2699	Class: 8	Packing group: I
Proper shipping name: Trifluoroacetic acid		

IMDG

UN-Number: 2699	Class: 8	Packing group: I
Proper shipping name: Trifluoroacetic acid		

DOT (US)

UN-Number: 2699	Class: 8	Packing group: I
Proper shipping name: Trifluoroacetic acid		
Marine pollution: No		

15. REGULATORY INFORMATION

Hazard statements

H314: Causes severe skin burns and eye damage.

H332: Harmful if inhaled.

H412: Harmful to aquatic life with long lasting effects.

Precautionary statements

P273: Avoid release to the environment.

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.

GHS-Labeling

Pictogram



Signal word *Danger*

R-phrase(s): 20-35-52/53

Harmful by inhalation. Causes severe burns. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s): 9-26-27-28-45-61

Keep container in a well-ventilated place. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of soap and water. In case of accident or if you feel unwell, seek medical advice immediately. Avoid release to environment.

16. OTHER INFORMATION

Copyright 2011 Anaqua Chemicals Supply. License granted to make unlimited paper copies for internal use only. The information, data, and recommendations in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or in any process. The information, data, and recommendations set forth herein are believed by us to be accurate. We make no warranties, either expressed or implied, with respect thereto and assume no liability in connection with any use of such information, data, and recommendations.