

ACROS ORGANICS

Material Safety Data Sheet

Creation Date 21-Sep-2009

Revision Date 23-Sep-2009

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Trifluoroacetic acid	
Cat No.	AC139720000; AC139720010; AC139720025; AC139720250; AC139721000; AC139725000	
Synonyms	TFA; Trifluoroethanoic acid; Perfluoroacetic acid	
Recommended Use	Laboratory chemicals	
Company Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	Entity / Business Name Acros Organics One Reagent Lane Fair Lawn, NJ 07410	Emergency Telephone Number For information in the US, call: 800-ACROS-01 For information in Europe, call: +32 14 57 52 11 Emergency Number, Europe: +32 14 57 52 99 Emergency Number, US: 201-796-7100 CHEMTREC Phone Number, US: 800-424- 9300 CHEMTREC Phone Number, Europe: 703- 527-3887

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

Causes severe burns by all exposure routes. Harmful by inhalation. Inhalation may cause central nervous system effects.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Hygroscopic.

Appearance Clear, Colorless

Physical State Liquid

Odor pungent

Target Organs Eyes, Respiratory system, Skin, Central nervous system (CNS), Liver, Kidney

Potential Health Effects

Acute Effects

Principle Routes of Exposure

Eyes	Causes severe burns.
Skin	Causes severe burns. May be harmful in contact with skin.
Inhalation	Causes severe burns. Harmful by inhalation. Inhalation may cause central nervous system effects.
Ingestion	Causes severe burns. May be harmful if swallowed.

Chronic Effects

Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects. May cause adverse kidney effects.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Trifluoroacetic acid	76-05-1	99

4. FIRST AID MEASURES

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
Ingestion	Do not induce vomiting. Call a physician or Poison Control Center immediately.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point	No information available.
Method	No information available.
Autoignition Temperature	No information available.
Explosion Limits	
Upper	No data available
Lower	No data available
Suitable Extinguishing Media	CO ₂ , dry chemical, dry sand, alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available.
Hazardous Combustion Products	No information available.
Sensitivity to mechanical impact	No information available.

Sensitivity to static discharge

No information available.

Specific Hazards Arising from the Chemical

Corrosive Material. Causes severe burns by all exposure routes.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health 3

Flammability 0

Instability 0

Physical hazards N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

Environmental Precautions

Should not be released into the environment.

Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors/dust. Do not ingest.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Appearance

Clear, Colorless

Odor

pungent

Odor Threshold

No information available.

pH

2 100 g/L aq.sol.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure	107 mbar @ 25 °C
Vapor Density	3.9
Viscosity	0.813 cP at 25 °C
Boiling Point/Range	72°C / 161.6°F@ 760 mmHg
Melting Point/Range	-15°C / 5°F
Decomposition temperature °C	No information available.
Flash Point	No information available.
Evaporation Rate	No information available.
Specific Gravity	1.535
Solubility	Miscible with water
log Pow	No data available
Molecular Weight	114.02
Molecular Formula	C2 H F3 O2

10. STABILITY AND REACTIVITY

Stability	Hygroscopic.
Conditions to Avoid	Incompatible products. Exposure to moist air or water. Exposure to light. Excess heat.
Incompatible Materials	Strong oxidizing agents, Reducing agents, Acids, Strong bases, Metals, Amines
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Hydrogen fluoride
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Irritation Causes severe burns by all exposure routes

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects	Experiments have shown reproductive toxicity effects on laboratory animals.
Developmental Effects	Developmental effects have occurred in experimental animals.
Teratogenicity	No information available.
Other Adverse Effects	The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information.
Endocrine Disruptor Information	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Persistence and Degradability	No information available
Bioaccumulation/ Accumulation	No information available
Mobility	No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

14. TRANSPORT INFORMATION

DOT

UN-No	UN2699
Proper Shipping Name	TRIFLUOROACETIC ACID
Hazard Class	8
Packing Group	I

TDG

UN-No	UN2699
Proper Shipping Name	TRIFLUOROACETIC ACID
Hazard Class	8
Packing Group	I

IATA

UN-No	2699
Proper Shipping Name	TRIFLUOROACETIC ACID
Hazard Class	8

14. TRANSPORT INFORMATION

Packing Group |

IMDG/IMO

UN-No 2699
 Proper Shipping Name TRIFLUOROACETIC ACID
 Hazard Class 8
 Packing Group I

15. REGULATORY INFORMATION

All of the components in the product are on the following Inventory lists:

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Trifluoroacetic acid	X	X	-	200-929-3	-		X	X	X	X	KE-34233 X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Not applicable

Clean Air Act
Not applicable

OSHA
Not applicable

CERCLA
Not Applicable

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Trifluoroacetic acid	-	X	-	-	-

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

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

WHMIS Hazard Class

E Corrosive material



16. OTHER INFORMATION

Prepared By

Regulatory Affairs
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Tel: (412) 490-8929

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Revision Summary "****", and red text indicates revision

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS