

SAFETY DATA SHEET

Creation Date 23-Mar-2012 Revision Date 24-Dec-2021 Revision Number 5

1. Identification

Product Name 1,1,1-Trifluoroacetone

Cat No.: AC139740000; AC139740050; AC139740250; AC139741000;

AC139745000

CAS No 421-50-1

Synonyms 1,1,1-Trifluoro-2-propanone

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410
Fair Lawn, NJ 07410

Tel: (201) 796-7100

Emergency Telephone Number For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11

Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99 **CHEMTREC** Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Specific target organ toxicity (single exposure)

Category 1

Category 1

Category 3

Target Organs - Respiratory system.

Label Elements

Signal Word

Danger

Hazard Statements

Extremely flammable liquid and vapor

Causes severe skin burns and eye damage May cause respiratory irritation



Precautionary Statements

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Use only outdoors or in a well-ventilated area

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Keep cool

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Harmful to aquatic life with long lasting effects

Lachrymator (substance which increases the flow of tears)

3. Composition/Information on Ingredients

Component		CAS No	Weight %	
2-Pro	panone, 1,1,1-trifluoro-	421-50-1	>95	

4. First-aid measures

General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

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. Remove and wash

contaminated clothing and gloves, including the inside, before re-use. Call a physician

immediately.

Inhalation If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use

mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory

medical device. Call a physician immediately.

Ingestion Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an

unconscious person. Call a physician immediately.

Most important symptoms and

effects

Causes burns by all exposure routes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe

damage to the delicate tissue and danger of perforation

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water mist may be used to cool closed containers. CO 2, dry chemical, dry sand,

alcohol-resistant foam.

No information available

Unsuitable Extinguishing Media No information available

Flash Point -30 °C / -22 °F

Method - No information available

Autoignition Temperature

Explosion Limits

Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Extremely flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO2). Hydrogen fluoride.

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.

<u>NFPA</u>

Health Flammability Instability Physical hazards
3 4 1 N/A

6. Accidental release measures

Personal Precautions

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges.

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Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

Storage.

Keep away from heat, sparks and flame. Keep under nitrogen. Protect from moisture. Keep refrigerated. Keep container tightly closed in a dry and well-ventilated place. Incompatible Materials. Strong bases. Alkali metals. Finely powdered metals. . Oxidizing agent.

8. Exposure controls / personal protection

Exposure Guidelines

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

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment.

Personal Protective Equipment

Eye/face Protection

Tight sealing safety goggles. Face protection shield.

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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Physical and chemical properties

Liauid **Physical State Appearance** Colorless Odor Characteristic

Odor Threshold No information available pН Approximately neutral Melting Point/Range -78 °C / -108.4 °F

Boiling Point/Range 22 °C / 71.6 °F @ 760 mmHg

Flash Point -30 °C / -22 °F No information available **Evaporation Rate** Not applicable

Flammability (solid,gas)

Flammability or explosive limits

No data available Upper Lower No data available **Vapor Pressure** > 1.75 bar @ 50 °C Vapor Density No information available 1.250

Specific Gravity

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No information available

Solubility Partition coefficient; n-octanol/water

No data available **Autoignition Temperature** No information available **Decomposition Temperature** No information available **Viscosity** 3.28 mPa.s at 15 °C

Molecular Formula C3 H3 F3 O 112.05 **Molecular Weight**

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Hygroscopic.

Incompatible products. Excess heat. Keep away from open flames, hot surfaces and **Conditions to Avoid**

sources of ignition. Exposure to moist air or water.

Incompatible Materials Strong bases, Alkali metals, Finely powdered metals, , Oxidizing agent

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen fluoride

Hazardous Polymerization Hazardous polymerization does not occur.

None under normal processing. **Hazardous Reactions**

Toxicological information

Acute Toxicity

Product Information

Component Information

Toxicologically Synergistic

Products

No acute toxicity information is available for this product

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
2-Propanone,	421-50-1	Not listed				

No information available **Mutagenic Effects**

Reproductive Effects No information available. No information available. **Developmental Effects**

Teratogenicity No information available.

STOT - single exposure Respiratory system STOT - repeated exposure None known

No information available **Aspiration hazard**

delayed

Symptoms / effects,both acute and Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and

danger of perforation

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
2-Propanone, 1,1,1-trifluoro-	Not listed	Not listed	Not listed	EC50: 46 mg/l/48h

Persistence and Degradability

Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation

No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
2-Propanone, 1,1,1-trifluoro-	0.2

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 UN2924

Proper Shipping Name Flammable liquid, corrosive, n.o.s. **Technical Name** 2-Propanone, 1,1,1-trifluoro-

Hazard Class 3
Subsidiary Hazard Class 8

Packing Group

_TDG

UN-No UN2924

Proper Shipping Name Flammable liquid, corrosive, n.o.s.

Hazard Class 3 Subsidiary Hazard Class 8 Packing Group 1

IATA

UN-No UN2924

Proper Shipping Name Flammable liquid, corrosive, n.o.s.

Hazard Class 3 Subsidiary Hazard Class 8 Packing Group 1

IMDG/IMO

UN-No UN2924

Proper Shipping Name Flammable liquid, corrosive, n.o.s.

Hazard Class 3
Subsidiary Hazard Class 8
Packing Group 1

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification -	TSCA - EPA Regulatory
Component	CAS NO	ISCA	I SCA inventory notification -	13CA - EFA Regulatory

			Active-Inactive	Flags
2-Propanone, 1,1,1-trifluoro-	421-50-1	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed '-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
2-Propanone, 1,1,1-trifluoro-	421-50-1	-	Х	207-005-9	Х	-	Х	-	-	-

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and

Health Administration

Not applicable

CERCLA Not applicable

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

U.S. State Right-to-Know

Regulations

Not applicable

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 Severe risk, Grade 4

Authorisation/Restrictions according to EU REACH

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic	Ozone Depletion	Restriction of
			Pollutant	Potential	Hazardous

					Substances (RoHS)
2-Propanone, 1,1,1-trifluoro-	421-50-1	Not applicable	Not applicable	Not applicable	Not applicable
Component	CAS No	Seveso III Directive	Seveso III Directive	Rotterdam	Basel Convention
		(2012/18/EC) -	(2012/18/EC) -	Convention (PIC)	(Hazardous Waste)
		Qualifying Quantities	Qualifying Quantities		
		for Major Accident	for Safety Report		
		Notification	Requirements		
2-Propanone, 1,1,1-trifluoro-	421-50-1	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By Regulatory Affairs

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard

replacing the current legislation under 29 CFR 1910.1200 to align with the Globally

Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

End of SDS