

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS MSDS

CAS-No.: 75-89-8 MSDS



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
:
EC-No. : 200-913-6
CAS-No. : 75-89-8
Product code : B-02768
Formula : CF₃CH₂OH
Chemical structure :
CF3CH2OH

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Bio-Chem Chemicals
5455, Nicholson Road Science Market,
Ambala Cantt. 13001 Haryana (India)
+91-829541953
info@biofinechemical.com www.biofinechemical.com

1.4. Emergency telephone number

Emergency number : + 91 99921 51495 (10.00am- 06.30pm) (Office Hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), H301
Category 3
Acute toxicity (dermal), H312
Category 4
Acute toxicity (inhal.), H331
Category 3
Skin corrosion/irritation, H315
Category 2
Serious eye damage/eye irritation, H318
Category 1
Specific target organ toxicity — Single exposure, Category 3, H335

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

Respiratory tract irritation

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R20/21/22

Xi; R41

Xi; R37/38

R10

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Hazard pictograms (CLP)

:



GHS05

GHS06

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H301+H331 - Toxic if swallowed or if inhaled
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP)

: P261 - Avoid breathing vapours, dust, fume, gas.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P310 - IF SWALLOWED: Immediately call a doctor.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311 - Call a doctor.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS	(CAS-No.) 75-89-8 (EC-No.) 200-913-6	100

Full text of R- and H-statements: see section 16

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of water/.... Wash contaminated clothing before reuse. Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Harmful in contact with skin. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	: Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable solid.
Explosion hazard	: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
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6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: On land, sweep or shovel into suitable containers. Collect spillage.
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6.4. Reference to other sections

No additional information available

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling	: Keep away from sources of ignition - No smoking. Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Do not breathe vapours.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions	: Keep in fireproof place. Keep container tightly closed.
Incompatible materials	: Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	: Protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Molecular mass	: 100.04 g/mol
Colour	: Clear Colorless.
Odour	: alcoholic odour.
Odour threshold	: No data available
pH	: 5 - 7 (10% aq soln)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -44 °C
Freezing point	: No data available
Boiling point	: 73 - 75 °C
Flash point	: 29 °C

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

Auto-ignition temperature	: 480 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable Flammable solid.
Vapour pressure	: 93 hPa at 20 °C
Relative vapour density at 20 °C	: 3.45
Relative density	: No data available
Density	: 1.39 g/cm ³
Solubility	: Water: Soluble in water
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 1.75 cP @ 20°C
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.055 - 0.42 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Harmful in contact with skin. Inhalation: Toxic if inhaled.

Skin corrosion/irritation : Causes skin irritation.
pH: 5 - 7 (10% aq soln)

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

Serious eye damage/irritation	: Causes serious eye damage. pH: 5 - 7 (10% aq soln)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS (75-89-8)	
Viscosity, kinematic	1.259 mm²/s

Potential adverse human health effects and symptoms	: Harmful if swallowed. Harmful in contact with skin.
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SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information	: Handle empty containers with care because residual vapours are flammable.

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 1986
UN-No. (IMDG)	: 1986
UN-No. (IATA)	: 1986
UN-No. (ADN)	: 1986
UN-No. (RID)	: 1986

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.
Proper Shipping Name (IMDG)	: ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.
Proper Shipping Name (IATA)	: Alcohols, flammable, toxic, n.o.s.
Proper Shipping Name (ADN)	: ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.
Proper Shipping Name (RID)	: ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.
Transport document description (ADR)	: UN 1986 ALCOHOLS, FLAMMABLE, TOXIC, N.O.S., 3 (6.1), III, (D/E)
Transport document description (IMDG)	: UN 1986 ALCOHOLS, FLAMMABLE, TOXIC, N.O.S., 3 (6.1), III
Transport document description (IATA)	: UN 1986 Alcohols, flammable, toxic, n.o.s., 3 (6.1), III
Transport document description (ADN)	: UN 1986 ALCOHOLS, FLAMMABLE, TOXIC, N.O.S., 3 (6.1), III
Transport document description (RID)	: UN 1986 ALCOHOLS, FLAMMABLE, TOXIC, N.O.S., 3 (6.1), III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 3 (6.1)
Danger labels (ADR)	: 3, 6.1



IMDG

Transport hazard class(es) (IMDG)	: 3 (6.1)
Danger labels (IMDG)	: 3, 6.1



IATA

Transport hazard class(es) (IATA)	: 3 (6.1)
Hazard labels (IATA)	: 3, 6.1



ADN

Transport hazard class(es) (ADN)	: 3 (6.1)
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2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

Danger labels (ADN) : 3, 6.1



RID

Transport hazard class(es) (RID) : 3 (6.1)

Danger labels (RID) : 3, 6.1



14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : FT1

Special provisions (ADR) : 274

Limited quantities (ADR) : 5I

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, R001

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T7

Portable tank and bulk container special provisions (ADR) : TP1, TP28

Tank code (ADR) : L4BH

Tank special provisions (ADR) : TU15

Vehicle for tank carriage : FL

Transport category (ADR) : 3

Special provisions for carriage - Packages (ADR) : V12

Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28

Special provisions for carriage - Operation (ADR) : S2

Hazard identification number (Kemler No.) : 36

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

Orange plates

:



Tunnel restriction code (ADR)

: D/E

EAC code

: •3WE

APP code

: A(fl)

- Transport by sea

Special provisions (IMDG)

: 223, 274

Packing instructions (IMDG)

: P001

IBC packing instructions (IMDG)

: IBC03

Tank instructions (IMDG)

: T7

Tank special provisions (IMDG)

: TP1, TP28

EmS-No. (Fire)

: F-E

EmS-No. (Spillage)

: S-D

Stowage category (IMDG)

: A

Properties and observations (IMDG)

: Toxic if swallowed, by skin contact or by inhalation.

MFAG-No

: 131

- Air transport

PCA Excepted quantities (IATA)

: E1

PCA Limited quantities (IATA)

: Y343

PCA limited quantity max net quantity (IATA)

: 2L

PCA packing instructions (IATA)

: 355

PCA max net quantity (IATA)

: 60L

CAO packing instructions (IATA)

: 366

CAO max net quantity (IATA)

: 220L

Special provisions (IATA)

: A3

ERG code (IATA)

: 3P

- Inland waterway transport

Classification code (ADN)

: FT1

Special provisions (ADN)

: 274, 802

Limited quantities (ADN)

: 5 L

Excepted quantities (ADN)

: E1

Carriage permitted (ADN)

: T

Equipment required (ADN)

: PP, EP, EX, TOX, A

Ventilation (ADN)

: VE01, VE02

Number of blue cones/lights (ADN)

: 0

- Rail transport

Classification code (RID)

: FT1

Special provisions (RID)

: 274

Excepted quantities (RID)

: E1

Packing instructions (RID)

: P001, IBC03, R001

Mixed packing provisions (RID)

: MP19

Portable tank and bulk container instructions (RID)

: T7

Portable tank and bulk container special provisions (RID)

: TP1, TP28

Tank codes for RID tanks (RID)

: L4BH

Special provisions for RID tanks (RID)

: TU15

Transport category (RID)

: 3

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

Special provisions for carriage – Packages (RID) : W12

Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28

Colis express (express parcels) (RID) : CE4

Hazard identification number (RID) : 36

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS is not on the REACH Candidate List

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 4105)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Class for fire hazard : Class II-1

Store unit : 5 liter

Classification remarks : R10 <H301+H331;H312;H315;H318;H335>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

2,2,2-TRIFLUOROETHANOL FOR SYNTHESIS

Safety Data Sheet

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H301	Toxic if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
R10	Flammable
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R37/38	Irritating to respiratory system and skin
R41	Risk of serious damage to eyes
Xi	Irritant
Xn	Harmful

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product