

Revision Date 23-Mar-2012

Revision Number 2

## SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product Identifier**

**Product Description:** Trifluoroacetic acid 2,2,2-trifluoroethyl ester  
**Cat No.** 385320000; 385320250; 385321000  
**Synonyms** 2,2,2-Trifluoroethyl trifluoroacetate

**Relevant identified uses of the substance or mixture and uses advised against**

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**

Acros Organics BVBA  
 Janssen Pharmaceuticaaan 3a  
 2440 Geel, Belgium

**E-mail address** [begeel.sdsdesk@thermofisher.com](mailto:begeel.sdsdesk@thermofisher.com)

**Emergency Telephone Number**

For information in the US, call: 001-800-ACROS-01  
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99  
 Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300  
 CHEMTREC Phone Number, Europe: 001-703-527-3887

## SECTION 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

Skin Corrosion/irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Flammable liquids.	Category 2

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

*For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16*

**Symbol(s)** F - Highly flammable  
 C - Corrosive  
**R-phrases(s)** R11 - Highly flammable  
 R34 - Causes burns

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**SECTION 2. HAZARDS IDENTIFICATION**

Label Elements



**Signal Word**

**Danger**

**Hazard Statements**

H314 - Causes severe skin burns and eye damage

H225 - Highly flammable liquid and vapor

**Precautionary Statements - EU (§28, 1272/2008)**

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P280 - Wear 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

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P240 - Ground/Bond container and receiving equipment

**Other Hazards**

No information available.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
2,2,2-Trifluoroethyl trifluoroacetate 407-38-5	EEC No. 206-985-5	98	407-38-5	F; R11 C; R34;	Skin Corr. 1B (H314)	-

**For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16**

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**SECTION 4. FIRST AID MEASURES****Description of first aid measures****Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

**Ingestion**

Do not induce vomiting. Call a physician immediately.

**Inhalation**

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

**Notes to Physician**

Treat symptomatically

**SECTION 5. FIRE-FIGHTING MEASURES****Extinguishing media****Suitable Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. chemical foam.

**Extinguishing media which must not be used for safety reasons**

No information available.

**Special hazards arising from the substance or mixture**

Flammable. Vapors may travel to source of ignition and flash back.

**Advice for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

**Environmental precautions**

Prevent further leakage or spillage if safe to do so

**Methods and material for containment and cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

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**SECTION 7. HANDLING AND STORAGE****Precautions for Safe Handling**

Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use only in area provided with appropriate exhaust ventilation. Use explosion-proof equipment. Use only non-sparking tools.

**Conditions for safe storage, including any incompatibilities**

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Corrosives area. Flammables area.

**Specific End Uses****SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure limits**

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

**Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL)**

No information available.

**Predicted No Effect Concentration (PNEC)**

No information available.

**Exposure controls****Engineering Measures**

Ensure adequate ventilation, especially in confined areas Ensure that eyewash stations and safety showers are close to the workstation location

**Personal protective equipment****Eye Protection**

Goggles

**Hand Protection**

Protective gloves

**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

**Environmental exposure controls**

No information available.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****Physical State**

Liquid

**Appearance**

Colorless

**odor**

aromatic

**pH**

No information available.

**Vapor Pressure**

172.7 mmHg @ 20 °C

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point/Range	55°C / 131°F @ 760 mmHg
Melting Point/Range	-65°C / -85°F
Flash Point	0°C / 32°F
Autoignition Temperature	No information available.
Water Solubility	IMMISCIBLE
Specific Gravity	1.464
Molecular Formula	C4 H2 F6 O2
Molecular Weight	196.05

**SECTION 10. STABILITY AND REACTIVITY**ReactivityChemical Stability

Moisture sensitive.

Possibility of Hazardous Reactions

**Hazardous Polymerization** No information available.  
**Hazardous Reactions .** No information available.

Conditions to Avoid

Keep away from open flames, hot surfaces and sources of ignition, Incompatible products, Exposure to moist air or water.

Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases, Strong reducing agents.

Hazardous Decomposition ProductsCarbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Gaseous hydrogen fluoride (HF).**SECTION 11. TOXICOLOGICAL INFORMATION**Information on Toxicological EffectsAcute Toxicity**Product Information** No acute toxicity information is available for this product**Component Information**Chronic Toxicity**Carcinogenicity** There are no known carcinogenic chemicals in this product



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**SECTION 11. TOXICOLOGICAL INFORMATION**

<b>Sensitization</b>	No information available.
<b>Mutagenic Effects</b>	No information available
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Target Organs</b>	No information available.
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.
<b>Endocrine Disruptor Information</b>	None known

**SECTION 12. ECOLOGICAL INFORMATION**

**Toxicity**

**Ecotoxicity effects** Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment**

**Other adverse effects**

No information available

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from Residues / Unused Products** Dispose of in accordance with local regulations

**Contaminated Packaging** Empty containers should be taken to local recyclers for disposal

**SECTION 14. TRANSPORT INFORMATION**



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**SECTION 14. TRANSPORT INFORMATION**

**IMDG/IMO**

UN-No 2924  
Hazard Class 3  
Subsidiary Hazard Class 8  
Packing Group II  
Proper Shipping Name FLAMMABLE LIQUID, CORROSIVE, N.O.S.

**ADR**

UN-No 2924  
Hazard Class 3  
Subsidiary Hazard Class 8  
Packing Group II  
Proper Shipping Name FLAMMABLE LIQUID, CORROSIVE, N.O.S.

**IATA**

UN-No 2924  
Hazard Class 3  
Subsidiary Hazard Class 8  
Packing Group II  
Proper Shipping Name FLAMMABLE LIQUID, CORROSIVE, N.O.S.\*

**SECTION 15. REGULATORY INFORMATION**

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

**International Inventories**

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
2,2,2-Trifluoroethyl trifluoroacetate	206-985-5	-	-	-	-	-	-	-	-	-	-

**Legend**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- CHINA - China Inventory of Existing Chemical Substances
- AICS - Inventory of Chemical Substances
- KECL - Existing and Evaluated Chemical Substances

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**Chemical Safety Assessment****SECTION 16. OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R11 - Highly flammable

R34 - Causes burns

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Revision Summary

Reason for revision Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

**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 Safety Data Sheet