

Revision Date 01-May-2012

Revision Number 2

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

**Product Identifier**

**Product Description:** 1,1,2-Trichloroethane  
**Cat No.** 139430000; 139430010; 139432500  
**Synonyms** beta-Trichloroethane; Ethane trichloride; Vinyl trichloride

**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** begel.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**

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Carcinogenicity	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)** Xn - Harmful  
**R-phrases(s)** R40 - Limited evidence of a carcinogenic effect  
 R66 - Repeated exposure may cause skin dryness or cracking  
**Risk Combination Phrases** R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

1,1,2-Trichloroethane

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**SECTION 2. HAZARDS IDENTIFICATION**

Label Elements



**Signal Word**

**Warning**

**Hazard Statements**

- H302 - Harmful if swallowed
- H332 - Harmful if inhaled
- H351 - Suspected of causing cancer
- H312 - Harmful in contact with skin
- EUH066 - Repeated exposure may cause skin dryness or cracking

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

- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell
- P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

**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.
1,1,2-Trichloroethane 79-00-5	EEC No. 201-166-9	98	79-00-5	Xn; R20/21/22 Carc.Cat.3; R40 R66	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Carc. 2 (H351)	-

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

**SECTION 4. FIRST AID MEASURES**

Description of first aid measures

1,1,2-Trichloroethane

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**SECTION 4. FIRST AID MEASURES**

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.
<b>Ingestion</b>	Clean mouth with water. Aspiration hazard. Get medical attention.
<b>Inhalation</b>	Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.
<b>Notes to Physician</b>	Treat symptomatically

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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

No information available.

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

Vapors may form explosive mixtures with air. Non-combustible.

**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.. Provide adequate ventilation.

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

**1,1,2-Trichloroethane**
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Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist. Do not ingest. Use only in area provided with appropriate exhaust ventilation.

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

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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

1,1,2-Trichloroethane

European Union	The United Kingdom	France	Belgium	Spain
			TWA: 10 ppm 8 uren TWA: 56 mg/m <sup>3</sup> 8 uren Skin	Skin VLA-ED: 10 ppm 8 horas VLA-ED: 56 mg/m <sup>3</sup> 8 horas

**Component**

1,1,2-Trichloroethane

Italy	Germany	Portugal	The Netherlands	Finland
	MAK: 10 ppm 8 Stunden. MAK: 55 mg/m <sup>3</sup> 8 Stunden. skin notation Skin Peak: 20 ppm Peak: 110 mg/m <sup>3</sup> TWA: 10 ppm 8 Stunden. exposure factor 2 TWA: 55 mg/m <sup>3</sup> 8 Stunden. exposure factor 2	TWA: 10 ppm 8 horas Skin		TWA: 10 ppm 8 tunteina TWA: 55 mg/m <sup>3</sup> 8 tunteina STEL: 20 ppm 15 minuutteina STEL: 110 mg/m <sup>3</sup> 15 minuutteina

**Component**

1,1,2-Trichloroethane

Austria	Denmark	Switzerland	Poland	Norway
Skin STEL: 50 ppm 15 Minuten STEL: 275 mg/m <sup>3</sup> 15 Minuten TWA: 10 ppm 8 Stunden TWA: 55 mg/m <sup>3</sup> 8 Stunden	TWA: 10 ppm 8 timer TWA: 54 mg/m <sup>3</sup> 8 timer Skin	Skin STEL: 20 ppm 15 Minuten STEL: 110 mg/m <sup>3</sup> 15 Minuten MAK: 10 ppm 8 Stunden MAK: 55 mg/m <sup>3</sup> 8 Stunden	NDSch: 100 mg/m <sup>3</sup> 15 minutach NDS: 45 mg/m <sup>3</sup> 8 godzinach	TWA: 10 ppm 8 timer TWA: 54 mg/m <sup>3</sup> 8 timer STEL: 20 ppm 15 minutter. STEL: 81 mg/m <sup>3</sup> 15 minutter. Skin

**Component**

1,1,2-Trichloroethane

Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
TWA: 45.0 mg/m <sup>3</sup>		TWA: 10 ppm 8 hr. TWA: 45 mg/m <sup>3</sup> 8 hr. STEL: 20 ppm 15 min STEL: 90 mg/m <sup>3</sup> 15 min Skin		TWA: 50 mg/m <sup>3</sup> 8 hodinách. Potential for cutaneous absorption Ceiling: 100 mg/m <sup>3</sup>

**1,1,2-Trichloroethane**
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Component	Estonia	Gibraltar	Greece	Hungary	Iceland
1,1,2-Trichloroethane			skin - potential for cutaneous absorption TWA: 10 ppm TWA: 55 mg/m <sup>3</sup>		TWA: 10 ppm 8 klukkustundum. TWA: 54 mg/m <sup>3</sup> 8 klukkustundum. Skin notation Ceiling: 20 ppm Ceiling: 108 mg/m <sup>3</sup>

Component	Russia - TWA	Slovak Republic	Slovenia	Sweden	Turkey
1,1,2-Trichloroethane		Potential for cutaneous absorption Ceiling: 110 mg/m <sup>3</sup>	TWA: 10 ppm 8 urah TWA: 55 mg/m <sup>3</sup> 8 urah Potential for cutaneous absorption STEL: 40 ppm 15 minutah STEL: 220 mg/m <sup>3</sup> 15 minutah		

**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

**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**

Clear

**odor**

sweet

**pH**

No information available.

**Vapor Pressure**

20 @ 25 mbar °C

**Vapor Density**

4.63 (Air = 1.0)

**Viscosity**

1.69 cP at 25 °C

**Boiling Point/Range**

110 - 115°C / 230 - 239°F @ 760 mmHg

**1,1,2-Trichloroethane**
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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Melting Point/Range</b>	-37°C / -34.6°F
<b>Flash Point</b>	No information available.
<b>Autoignition Temperature</b>	459°C / 858.2°F
<b>Explosion Limits</b>	
<b>Lower</b>	6
<b>Upper</b>	15.5
<b>Water Solubility</b>	4 g/L (20°C)
<b>Specific Gravity</b>	1.430
<b>Molecular Formula</b>	C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub>
<b>Molecular Weight</b>	133.4

**SECTION 10. STABILITY AND REACTIVITY**
Reactivity
Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions .</b>	No information available.

Conditions to Avoid

Excess heat, Incompatible products.

Incompatible Materials

Bases, Strong oxidizing agents, Strong bases, Metals.

Hazardous Decomposition Products

 Hydrogen chloride gas. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Chlorine. Phosgene.

**SECTION 11. TOXICOLOGICAL INFORMATION**
Information on Toxicological Effects
Acute Toxicity

<b>Product Information</b>	No acute toxicity information is available for this product
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Component Information

<b>Component</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>	<b>LC50 Inhalation</b>
1,1,2-Trichloroethane	836 mg/kg ( Rat )		

**1,1,2-Trichloroethane**

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**Chronic Toxicity**

**Carcinogenicity**

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

**Sensitization**

No information available.

**Mutagenic Effects**

No information available

**Reproductive Effects**

No information available.

**Developmental Effects**

No information available.

**Target Organs**

No information available.

**Other Adverse Effects**

See actual entry in RTECS for complete information

**Endocrine Disruptor Information**

None known

**SECTION 12. ECOLOGICAL INFORMATION**

**Toxicity**

**Ecotoxicity effects**

Do not empty into drains

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1,1,2-Trichloroethane	167 mg/L EC50 = 96 h 60 mg/L EC50 = 96 h	35-47 mg/L LC50 96 h 81.6 mg/L LC50 96 h	EC50 = 105 mg/L 5 min	18 mg/L EC50 = 48 h 57 - 110 mg/L EC50 48 h

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

Component	log Pow
1,1,2-Trichloroethane	1.89

**Mobility in soil**

**Results of PBT and vPvB assessment**

**Other adverse effects**

No information available

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**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**

IMDG/IMO

**UN-No** 2810  
**Hazard Class** 6.1  
**Packing Group** III  
**Proper Shipping Name** TOXIC LIQUID, ORGANIC, N.O.S.

ADR

**UN-No** 2810  
**Hazard Class** 6.1  
**Packing Group** III  
**Proper Shipping Name** TOXIC LIQUID, ORGANIC, N.O.S.

IATA

**UN-No** 2810  
**Hazard Class** 6.1  
**Packing Group** III  
**Proper Shipping Name** TOXIC LIQUID, ORGANIC, 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
1,1,2-Trichloroethane	201-166-9	-		T	X	-	X	X	X	X	X

Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory



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**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

### Chemical Safety Assessment

## SECTION 16. OTHER INFORMATION

### Full text of R-phrases referred to under sections 2 and 3

R40 - Limited evidence of a carcinogenic effect

R66 - Repeated exposure may cause skin dryness or cracking

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

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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