

Revision Date 24-Nov-2010

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

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

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 mentioned in this Section, see Section 16

Symbol(s) Xn - Harmful
R -phrase(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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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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
1,1,2-Trichloroethane 79-00-5	EEC No. 201-166-9	98	79-00-5	Carc. Cat. 3; R40 Xn; R20/21/22 R66	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Carc. 2 (H351)	-

For the full text of the R phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of first aid measures

1,1,2-Trichloroethane

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4. FIRST AID MEASURES

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

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

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 and closed containers for disposal. Provide adequate ventilation.

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 ingest Use only in area provided with appropriate exhaust ventilation

Conditions for safe storage, including any incompatibilities

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

Specific End Uses

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 TWA: 56 mg/m ³	VLA-ED: 56 mg/m ³ VLA-ED: 10 ppm

Component

1,1,2-Trichloroethane

Italy	Portugal	The Netherlands	Finland	Denmark
	TWA: 10 ppm		TWA: 55 mg/m ³ TWA: 10 ppm STEL: 110 mg/m ³ STEL: 20 ppm	TWA: 10 ppm TWA: 54 mg/m ³

Component

1,1,2-Trichloroethane

Austria	Switzerland	Poland	Norway	Ireland
STEL: 50 ppm STEL: 275 mg/m ³ MAK: 55 mg/m ³ MAK: 10 ppm	STEL: 20 ppm STEL: 110 mg/m ³ MAK: 55 mg/m ³ MAK: 10 ppm	NDSch: 100 mg/m ³ NDS: 45 mg/m ³	TWA: 10 ppm TWA: 54 mg/m ³	TWA: 10 ppm TWA: 45 mg/m ³ STEL: 20 ppm STEL: 90 mg/m ³ Skin

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Appearance

Clear

odor

sweet

pH

No information available.

1,1,2-Trichloroethane

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9. PHYSICAL AND CHEMICAL PROPERTIES

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

10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions .

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 (CO₂). Chlorine. Phosgene.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Product Information

No acute toxicity information is available for this product

Component Information

Component

1,1,2-Trichloroethane

LD50 Oral	LD50 Dermal	LC50 Inhalation
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

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects

Do not empty into drains

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1,1,2-Trichloroethane	60 mg/L EC50 = 96 h 167 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

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 for local recycling, recovery or waste disposal

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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.*

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	KE-34069 X

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory Lists
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

1,1,2-Trichloroethane**Revision Date 24-Nov-2010****16. OTHER INFORMATION****Text of R phrases mentioned in Section 2-3**

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

Revision Date 24-Nov-2010**Revision Summary** Not applicable**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

The information provided on this SDS 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