SIGMA-ALDRICH

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 Version 3.0 Revision Date 18.03.2009 Print Date 13.07.2010

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : 1,1,1-Trichloroethane

Product Number : 02669 Brand : Fluka

Company : Sigma-Aldrich

3050 Spruce Street SAINT LOUIS MO 63103

USA

Telephone : +18003255832 Fax : +18003255052 Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Harmful by inhalation. Dangerous for the ozone layer.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 'Chlorothene'

Methylchloroform

Formula : C₂H₃Cl₃

CAS-No.	EC-No.	Index-No.	Classification	Concentration
1,1,1-Trichloroethane				
71-55-6	200-756-3	602-013-00-2	Xn, N, R20 - R59	>= 99,8 %
Low alkyl epoxide				
-	-	-	F, Xn, R11 - R22	<= 0,05 %

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

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid inhalation of vapour or mist.

Normal measures for preventive fire protection.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form liquid, clear

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Colour colourless

Safety data

pH no data available

Melting point -35 °C

Boiling point 72,0 - 75,0 °C

Flash point no data available

Ignition temperature 537 °C -Lower explosion limit 7,5 %(V) Upper explosion limit 15 %(V)

Vapour pressure 133,3 hPa at 20,0 °C

Density 1,336 g/mL at 20 °C

Water solubility no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents, Potassium, Magnesium, Sodium/sodium oxides, Zinc, Strong bases

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

Contains the following stabiliser(s):

Low alkyl epoxide (<=0,05 %)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 9.600 mg/kg

Remarks: Cardiac:Pulse rate. Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

LC50 Inhalation - rat - 4 h - 18000 ppm

Irritation and corrosion

Skin - rabbit - Skin irritation - 24 h

Eyes - rabbit - Severe eye irritation - 24 h

Sensitisation

no data available

Chronic exposure

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (1,1,1-Trichloroethane)

Laboratory experiments have shown mutagenic effects.

Laboratory experiments have shown teratogenic effects.

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

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Signs and Symptoms of Exposure

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Exposure to and/or consumption of alcohol may increase toxic effects., prolonged or repeated exposure can cause:, narcosis, Liver injury may occur., Kidney injury may occur.

Potential Health Effects

Inhalation Harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation. **Ingestion** May be harmful if swallowed.

Target Organs Central nervous system, Cardiovascular system., Liver, Kidney,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Bioaccumulation Lepomis macrochirus (Bluegill) - 28 d

Bioconcentration factor (BCF): 9

Ecotoxicity effects

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 53,00 mg/l - 96 h

Growth inhibition NOEC - Cyprinus carpio (Carp) - 7,7 mg/l - 14 d LC50 - Pimephales promelas (fathead minnow) - 42,3 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates.

Immobilization EC50 - Daphnia magna (Water flea) - 11,2 mg/l - 48 h

Further information on ecology

Dangerous for the ozone layer.

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 2831 Class: 6.1 Packing group: III

Proper shipping name: 1,1,1-TRICHLOROETHANE

IMDG

UN-Number: 2831 Class: 6.1 Packing group: III EMS-No: F-A, S-A

Proper shipping name: 1,1,1-TRICHLOROETHANE

Marine pollutant: No

IATA

UN-Number: 2831 Class: 6.1 Packing group: III

Proper shipping name: 1,1,1-Trichloroethane

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15. REGULATORY INFORMATION

Labelling according to EC Directives

EC Label

Hazard symbols

Xn Harmful

N Dangerous for the environment

R-phrase(s)

R20 Harmful by inhalation.

R59 Dangerous for the ozone layer.

S-phrase(s)

S24/25 Avoid contact with skin and eyes.

Refer to manufacturer/supplier for information on recovery/recycling.

S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Hazardous components which must be listed on the label:

71-55-6 1,1,1-Trichloroethane

16. OTHER INFORMATION

Text of R-phrases mentioned in Section 3

R11 Highly flammable.
R20 Harmful by inhalation.
R22 Harmful if swallowed.

R59 Dangerous for the ozone layer.

Further information

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