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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 24 Apr 2025

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

1.1. Product name:

1,1,1-Trichloroethane

1.1. Catalog No.:

676880

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

1.3. Uses advised against:

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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Ozone 1 H420 Harms public health and the environment by destroying ozone in the upper atmosphere
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

2.2.1. Pictogram

2.2.2.

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Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

Signal word Warning

Hazard statements
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.
H420 Harms public health and the environment by destroying ozone in the upper atmosphere

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves / eye protection / face protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical characterisation: Substances

CAS No. 71-55-6
Description 1,1,1-Trichloroethane
Identification number(s) None
EC number: 200-756-3
Index number: 602-013-00-2
RTECS: KJ2975000

3.1.1. Formula

C2H3Cl3

3.1.2. Molecular Weight (g/mol)

133.40

3.1.3. CAS-No.

71-55-6

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information:
Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.

After inhalation:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient in recovery position for transport.
Seek medical treatment.

After skin contact:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Rinse mouth. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable for surrounding conditions.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

Protective equipment:
Mouth respiratory protective device.
Wear self-contained respiratory protective device.

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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing.

6.2 Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure good ventilation/extraction at the workplace.
Store in cool, dry place in tightly closed receptacles.

Information about fire - and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles:
Please refer to the manufacturer certificate for specific storage and transport temperature conditions.
Store only in the original receptacle unless other advice is given on the CoA.
Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
Information about storage in one common storage facility: Store away from foodstuffs.
Further information about storage conditions: Keep container tightly sealed.

7.3 Specific end use(s)

No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
CAS: 71-55-6 1,1,1-Trichloroethane
WEL Short-term value: 1110 mg/m³, 200 ppm
Long-term value: 555 mg/m³, 100 ppm

Additional information: Lists used were valid at the time of SDS preparation.

8.2 Exposure controls

Personal protective equipment:

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General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374
Material of gloves: Fluorocarbon rubber (Viton)
Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:
Tightly sealed goggles

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:
Form: Liquid
Colour: Colourless
Odour: Like chlorine
Odour threshold: Not determined.
pH-value: Not determined.
Change in condition:
Melting point/freezing point: -30.4 °C
Initial boiling point and boiling range: 74 °C
Flash point: Not applicable.
Flammability (solid, gas): Not determined.
Ignition temperature: 490 °C
Decomposition temperature: Not determined.
Auto-ignition temperature: Not determined.
Explosive properties: Not determined.
Explosion limits:
Lower: 9.5 Vol %
Upper: 15.5 Vol %
Vapour pressure at 20 °C: 133 hPa
Density at 20 °C: 1.34 g/cm³
Relative density Not determined.
Vapour density Not determined.
Evaporation rate Not determined.
Solubility in Acetone/Ethyl Acetate/Methanol
Miscibility with water at 20 °C: 1.3 g/l
Partition coefficient: n-octanol/water: 2.49 Log P
Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.

9.2 Other information

No further relevant information available

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10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.
No further relevant information available.

10.2 Chemical stability

Stable under normal conditions.

Thermal decomposition / conditions to be avoided:
Formation of toxic gases is possible during heating or in case of fire.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Formation of toxic gases is possible during heating or in case of fire

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: Harmful if inhaled.
LD/LC50 values relevant for classification:
Oral LD50:
6,000 mg/kg (mouse)
9,600 mg/kg (rat)
5,660 mg/kg (rabbit)
Dermal:
LD50 >2,000 mg/kg (rat)
LD 50 (Intraperitoneal) 3,593 mg/kg (rat)
Primary irritant effect:
Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/irritation
Causes serious eye irritation.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity:
LC50/48 11.2 mg/l (crustacean)
EC50/48 h 57.6 mg/l (daphnia)
EC50/72h 430 mg/l (Algae)
LC50/96 h 55 mg/l (fish)

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:
Remark: Harmful to fish
Additional ecological information:
General notes:
Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Harmful to aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects

No further relevant information available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

European waste catalogue
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

Uncleaned packaging:
Recommendation: Dispose of in accordance with national regulations.
Recommended cleansing agents: Water, if necessary together with cleansing agents.

14. TRANSPORT INFORMATION

14.1 UN-Number

ADR, IMDG, IATA UN2831
ADR 2831 1,1,1-TRICHLOROETHANE
IMDG, IATA 1,1,1-TRICHLOROETHANE

14.3 Transport hazard class(es)

ADR, IMDG, IATA
Class 6.1 Toxic substances.
Label 6.1

14.4 Packing group

ADR, IMDG, IATA III

14.5 Environmental hazards: Not applicable.

14.6 Special precautions for user Warning: Toxic substances.

Danger code (Kemler): 60
EMS Number: F-A,S-A
Segregation groups Liquid halogenated hydrocarbons
Stowage Category A
Stowage Code SW2 Clear of living quarters.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

Transport/Additional information:
ADR
Limited quantities (LQ) 5L
Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
Transport category 2
Tunnel restriction code E
UN "Model Regulation": UN 2831 1,1,1-TRICHLOROETHANE, 6.1, III

15. REGULATORY INFORMATION

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

Directive 2012/18/EU
Named dangerous substances - ANNEX I Substance is not listed.
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
Regulation (EU) No 649/2012 Annex I Part 1

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any
guarantee of the properties of the product. For lab use only!