

Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision date: 28.05.2015

Version: 1.0

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SECTION 1: Identification

Product identifier

| | |
|--------------------------------|---|
| Trade name/designation: | Trichloroacetic acid 6.12M |
| Product No.: | BDH7372 |
| Substance name: | Trichloroacetic acid (glacial) (5 - < 100%) in aqueous solution |
| CAS No.: | 76-03-9 |
| INDEX No.: | 607-004-00-7 |
| REACH registration No.: | Not yet communicated down the supply chain. |
| Other means of identification: | |

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

| | |
|---------------------------|--------------------------|
| Relevant identified uses: | General chemical reagent |
|---------------------------|--------------------------|

Details of the supplier of the safety data sheet

VWR International, LLC

| | |
|------------------|-----------------------|
| Street | 100 Matsonford Road |
| Postal code/city | Radnor, PA 19087-8660 |
| Telephone | 610-386-1700 |
| E-mail | www.vwr.com |

Emergency telephone

| | |
|-----------|--|
| Telephone | +1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA) |
|-----------|--|

VWR International Co.

| | |
|------------------|--------------------------|
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Emergency telephone

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|-----------|--|

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according GHS

| Hazard classes and hazard categories | Hazard statements |
|--|-------------------|
| Skin corrosion, category 1A | H314 |
| Specific target organ toxicity (single exposure), category 3, vascular | H335 |
| Hazardous to the aquatic environment, chronic, category 1 | H410 |

Classification according to Directive 67/548/EEC or 1999/45/EC

| | | |
|---|-------------------------------|--------|
| C | Corrosive | R35 |
| N | Dangerous for the environment | R50/53 |

Label elements

Labelling according GHS

Hazard pictograms



Signal word: Danger

| Hazard statements | |
|-------------------|---|
| H314 | Causes severe skin burns and eye damage. |
| H335 | May cause respiratory irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |

| Precautionary statements | |
|--------------------------|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P273 | Avoid release to the environment. |
| P301+P330+P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308+P310 | IF exposed or concerned: Immediately call a POISON CENTER/doctor/... |

Labelling (67/548/EEC or 1999/45/EC)

Hazard symbols

C, N

| R-phrases | |
|-----------|--|
| R35 | Causes severe burns. |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

| S-phrases | |
|-----------|---|
| S26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| S36/37/39 | Wear suitable protective clothing, gloves and eye/face protection. |
| S45 | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). |
| S60 | This material and its container must be disposed of as hazardous waste. |
| S61 | Avoid release to the environment. Refer to special instructions/safety data sheets. |

Other hazards

SVHC No

SECTION 3: Composition / information on ingredients

Hazardous ingredients Classification according to the OSHA Hazard Communication Standard 29 CFR 1910.1200

| Substance name | Concentration | Product identifier | Hazard classes and hazard categories |
|--------------------------------|---------------|---|---|
| Trichloroacetic acid (glacial) | >5% | CAS No.: EC No.: REACH No.: Not yet communicated down the supply chain. | Skin corrosion, category 1A - H314 Specific target organ toxicity (single exposure), category 3, vascular - H335 Hazardous to the aquatic environment, chronic, category 1 - H410 |

Hazardous ingredients Classification according to 67/548/EEC

| Substance name | Concentration | Product identifier | Hazard classes and hazard categories |
|--------------------------------|---------------|---|---|
| Trichloroacetic acid (glacial) | >5% | CAS No.: EC No.: REACH No.: Not yet communicated down the supply chain. | C, Corrosive, R35 N, Dangerous for the environment, R50/53 |

SECTION 4: First aid measures

General information

IF exposed: Immediately call a POISON CENTRE/doctor/.... If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

After inhalation

Immediately call a POISON CENTRE/doctor/.... Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of ingestion

Immediately call a POISON CENTRE/doctor/.... Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

Most important symptoms and effects, both acute and delayed

no data available

Indication of any immediate medical attention and special treatment needed

no data available

Self-protection of the first aider

First aider: Pay attention to self-protection!

Information to physician

no data available

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Extinguishing media which must not be used for safety reasons

no restriction

Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide (CO₂) Carbon monoxide Hydrogen chloride (HCl) Sulphur oxides

Advice for firefighters

DO NOT fight fire when fire reaches explosives. In case of fire: Wear self-contained breathing apparatus.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Use personal protection equipment.

Environmental precautions

Do not allow to enter into surface water or drains. Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Soak up inert absorbent and dispose as waste requiring special attention. Collect in closed and suitable containers for disposal.

Additional information

Clear spills immediately.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid: Inhalation Avoid contact with skin and eyes. Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. Usual measures for fire prevention. Handle under (Gas): Protective gas, dry Protect from moisture.

Conditions for safe storage, including any incompatibilities

storage temperature: 15-25 °C

Storage class: 8B

Keep container tightly closed in a cool, well-ventilated place. Always close containers tightly after the removal of product.

Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

Control parameters

| Ingredient (Designation) | Regulatory information | Country | Limit value type (country of origin) | Limit value | Remark |
|-----------------------------|---------------------------|---------|---|-------------|--------|
| | | | | | |

Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

Eye/face protection

Eye glasses with side protection DIN-/EN-Norms: DIN EN 166

Recommendation: VWR 111-0432

Skin protection

no data available

By short-term hand contact

Suitable material: no data available

Thickness of the glove material: no data available

Breakthrough time (maximum wearing time): no data available

Recommended glove articles: no data available

By long-term hand contact

Suitable material: no data available

Thickness of the glove material: no data available

Breakthrough time (maximum wearing time): no data available

Recommended glove articles: no data available

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Suitable respiratory protection apparatus: Full-/half-/quarter-face masks (DIN EN 136/140)

Recommendation: VWR 111-0206

Suitable material: A2B2E2K2P3

Recommendation: VWR 111-0059

Additional information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls
no data available

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|----------------------|-------------------|
| (a) Appearance | |
| Physical state: | liquid |
| Colour: | colourless |
| (b) Odour: | no data available |
| (c) Odour threshold: | no data available |

Safety relevant basic data

| | |
|--|---------------------------------|
| (d) pH: | 0.3 (20 °C) |
| (e) Melting point/freezing point: | 54 - 56 °C |
| (f) Initial boiling point and boiling range: | 196 °C (1013 hPa) |
| (g) Flash point: | no data available |
| (h) Evaporation rate: | no data available |
| (i) Flammability (solid, gas): | not applicable |
| (j) Upper/lower flammability or explosive limits | |
| Lower explosion limit: | no data available |
| Upper explosion limit: | no data available |
| (k) Vapour pressure: | no data available |
| (l) Vapour density: | no data available |
| (m) Relative density: | <1.07 g/cm ³ (20 °C) |
| (n) Solubility(ies) | |
| at 20 °C: | no data available |
| Soluble (g/L) in: | no data available |
| (o) Partition coefficient: n-octanol/water: | 1.33 |
| (p) Auto-ignition temperature: | no data available |
| (q) Decomposition temperature: | no data available |
| (r) Viscosity | |
| Kinematic viscosity: | no data available |
| Dynamic viscosity: | no data available |
| (s) Explosive properties: | not applicable |
| (t) Oxidising properties: | not applicable |

Other information

| | |
|------------------------|-------------------|
| Bulk density: | no data available |
| Refraction index: | no data available |
| Dissociation constant: | no data available |
| Surface tension: | no data available |
| Henry constant: | no data available |

SECTION 10: Stability and reactivity

Reactivity

no data available

Chemical stability

no data available

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Incompatible materials

no data available

Hazardous decomposition products

no data available

Additional information

no data available

SECTION 11: Toxicological information

Information on toxicological effects**Acute effects**

Acute oral toxicity:

no data available

Acute dermal toxicity:

no data available

Acute inhalation toxicity:

no data available

Irritant and corrosive effects

Primary irritation to the skin:

Causes severe skin burns and eye damage.

Irritation to eyes:

Causes serious eye damage.

Irritation to respiratory tract:

May cause respiratory irritation.

Respiratory or skin sensitisation

In case of skin contact: not sensitising

After inhalation: not sensitising

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**Carcinogenicity**

No indication of human carcinogenicity.

Germ cell mutagenicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

not applicable

Other adverse effects

no data available

Additional information

no data available

SECTION 12: Ecological information

Ecotoxicity**Acute (short-term) fish toxicity:**

no data available

Chronic (long-term) fish toxicity:

no data available

Acute (short-term) daphnia toxicity:

no data available

Chronic (long-term) daphnia toxicity:

no data available

Acute (short-term) algae toxicity:

no data available

Chronic (long-term) algae toxicity:

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Partition coefficient: n-octanol/water: 1,33

Mobility in soil:

no data available

Results of PBT/vPvB assessment

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations

Waste treatment methods

Appropriate disposal / Product

Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal. Send to a hazardous waste incinerator facility under observation of official regulations.

Waste code product: no data available

Appropriate disposal / Package

Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

Additional information

no data available

SECTION 14: Transport information

Land transport (ADR/RID/DOT)

| | |
|--|--|
| UN-No.: | 2564 |
| Proper Shipping Name: | TRICHLOROACETIC ACID SOLUTION |
| Class(es): | 8 |
| Classification code: | C3 |
| Hazard label(s): | 8 |
| Packing group: | II |
| Environmental hazards: | No |
| Special precautions for user: | |
| Hazard identification number (Kemler No.): | 80 |
| Tunnel restriction code: | E |
| | (Passage forbidden through tunnels of category E.) |

Sea transport (IMDG)

| | |
|--|-------------------------------|
| UN-No.: | 2564 |
| Proper Shipping Name: | TRICHLOROACETIC ACID SOLUTION |
| Class(es): | 8 |
| Classification code: | |
| Hazard label(s): | 8 |
| Packing group: | II |
| Environmental hazards: | No |
| MARINE POLLUTANT: | No |
| Special precautions for user: | |
| Segregation group: | 1 |
| EmS-No. | F-A S-B |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | |
| not relevant | |

Air transport (ICAO-TI / IATA-DGR)

| | |
|------------------------------|-------------------------------|
| UN-No.: | 2564 |
| Proper Shipping Name: | TRICHLOROACETIC ACID SOLUTION |
| Class(es): | 8 |
| Classification code: | C3 |
| Hazard label(s): | 8 |
| Packing group: | II |
| Special precautions for user | not relevant |

SECTION 15: Regulatory information

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

General rules

Water hazard class (WGK): slightly hazardous to water (WGK 1)

California Prop 65 Components

This product does contain chemicals known to the State of California to cause cancer, birth, or other reproductive defects.

Trichloroacetic acid (glacial) cancer

Chemical Safety Assessment

no data available

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road

AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)

CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures

DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)

DOT – U.S. Department of Transportation

Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)

IATA-DGR - International Air Transport Association-Dangerous Goods Regulations

ICAO-TI - International Civil Aviation Organization-Technical Instructions

IMDG - International Maritime Code for Dangerous Goods

LTV - Long Term Value

NIOSH - National Institute for Occupational Safety and Health

OSHA - Occupational Safety & Health Administration

PBT - Persistent, Bioaccumulative and Toxic

RID - Regulation concerning the International Carriage of Dangerous Goods by Rail

STV - Short Term Value

SVHC - Substances of Very High Concern

vPvB - very Persistent, very Bioaccumulative

Additional information

Indication of changes: general update

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.