Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.04.2022 Version number 3.00 Revision: 25.04.2022

* 1 Identification of the substance/mixture and of the company/undertaking

· **Product identifier**

· **Trade name: Trichloracetic acid, cryst.**

· **Article number:** 2050
· **CAS Number:**
76-03-9
· **EC number:**
200-927-2
· **Index number:**
607-004-00-7
· **Registration number** The substance is exempt from REACH-registration.
· **Relevant identified uses of the substance or mixture and uses advised against**
· **Application of the substance / the mixture** Ingredient for pharmaceutical drugs
· **Uses advised against** No relevant information available.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
CAELO
Caesar & Loretz GmbH
Herderstr. 31
D-40721 Hilden
GERMANY

· **Further information obtainable from:**
E-mail: info@caelo.de
Tel.: +49210349940 (during regular opening hours)
· **Emergency telephone number:**
Poison Information Center Bonn
Venusberg-Campus 1, 53127 Bonn
Tel: +49 (0) 228-192400

* 2 Hazards identification

· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

Skin Corr. 1A	H314 Causes severe skin burns and eye damage.
Aquatic Acute 1	H400 Very toxic to aquatic life.
Aquatic Chronic 1	H410 Very toxic to aquatic life with long lasting effects.

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

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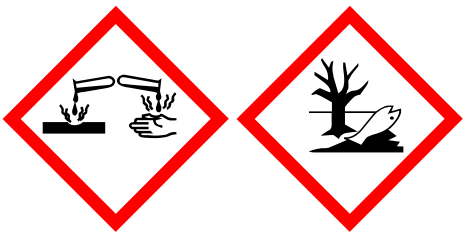
· **Hazard pictograms**



GHS05 GHS09

· **Signal word** Danger
· **Hazard statements**
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.
· **Precautionary statements**
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

* 3 Composition/information on ingredients

· **Chemical characterisation: Substances**
· **CAS No. Description**
76-03-9 trichloroacetic acid
· **Identification number(s)**
· **EC number:** 200-927-2
· **Index number:** 607-004-00-7
· **INCI-Name** Trichloroacetic Acid

4 First aid measures

· **Description of first aid measures**
· **After inhalation:**
Bring the person out of the contaminated area to fresh air.
Call a doctor immediately.
Show product-label or this MSDS.
· **After skin contact:**
Take off contaminated clothes and shoes, wash immediately with plenty of water and soap.

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Seek medical treatment.
Wash with polyethylene glycol 400 and then rinse with plenty amounts of water.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures
· **Extinguishing media**
· **Suitable extinguishing agents:**
All regular extinguishing media can be used.
Use fire extinguishing methods suitable to surrounding conditions.
· **Special hazards arising from the substance or mixture**
Combustible but not oxidising. In case of fire dangerous vapours/gases can be generated:
Carbon monoxide (CO)
Hydrogen chloride (HCl)
Phosgene gas
· **Advice for firefighters**
· **Protective equipment:** In case of fire wear suitable protective clothes and respiratory protection.
· **Additional information**
Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.

6 Accidental release measures
· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Take up dry. Clean up with water.
Dispose contaminated material as waste according to item 13.
· **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
· **Handling:**
· **Precautions for safe handling** Thorough dedusting.
· **Information about fire - and explosion protection:** No special measures required.

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· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Store receptacle in a well ventilated area.
· **Storage class:** TRHS 510: 8A Combustible corrosive substances
· **Specific end use(s)** No further relevant information available.

*
8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
CAS: 76-03-9 trichloroacetic acid
AGW (Germany) Long-term value: 1.4 mg/m³, 0.2 ppm
1(I);DFG, Y

· **Exposure controls**
· **Personal protective equipment:**
· **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:** Dust protection mask.
· **Protection of hands:** Protective gloves
· **Material of gloves**
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
Rubber gloves
Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· **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

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Crystalline powder
Colour:	White
· **Odour:**	Pungent

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· **Odour threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Change in condition**	
Melting point/freezing point:	56 °C
Initial boiling point and boiling range:	196 °C
· **Flash point:**	110 °C
· **Flammability (solid, gas):**	Product is not flammable.
· **Decomposition temperature:**	200 °C
· **Auto-ignition temperature:**	Not determined.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure at 20 °C:**	0.1 hPa
· **Density at 20 °C:**	1.62 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with water at 20 °C:**	1300 g/l
· **Partition coefficient: n-octanol/water:**	0.15836
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
· **Possibility of hazardous reactions**
Reacts with metals.
Reacts with oxidising agents.
Reaction with strong bases.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:**
Carbon monoxide
Carbon dioxide
Hydrogen chloride (HCl)

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Phosgen

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **LD/LC50 values relevant for classification:**
Oral LD50 3,320 mg/kg (rat)
· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
· **Serious eye damage/irritation**
Causes severe skin burns and eye damage.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Additional toxicological information:**
· **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

· **Toxicity**
· **Aquatic toxicity:**
LC50 >1,000 mg/L /48h (fish: leuciscus idus)
EC50 110 mg/L /48h (Daphnia magna)
35 mg/L /15min (Microorganism)
EC10 2,000 mg/L (bacteria: pseudomonas putida)
· **Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Very toxic for fish
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to local regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

* 14 Transport information

· **UN-Number**	
· **ADR, IMDG, IATA**	UN1839
· **UN proper shipping name**	
· **ADR**	1839 TRICHLOROACETIC ACID, ENVIRONMENTALLY HAZARDOUS
· **IMDG**	TRICHLOROACETIC ACID
· **IATA**	Trichloroacetic acid
· **Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	8 Corrosive substances.
· **Label**	8
· **Packing group**	
· **ADR, IMDG, IATA**	II
· **Environmental hazards:**	Environmentally hazardous substance, solid
· **Special marking (ADR):**	Symbol (fish and tree)
· **Special precautions for user**	Warning: Corrosive substances.
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	SGG1-Acids
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1 kg
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	1 kg

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)** Not listed

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· **REGULATION (EC) No 1907/2006 ANNEX XVII** Not listed

· **National regulations:**
· **Storage of hazardous substances in in nonstationary vessels (TRGS 510) (Germany)**
TRHS 510: 8A Combustible corrosive substances
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.
· **Reasons for alterations** This version replaces all old versions.
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
· *** Data compared to the previous version altered.**