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

- Informations to product No. 2050
- Product name:
  Trichloressigsäure cryst.
  Trichloroacetic acid
  Acidum trichloraceticum

- Supplier of the Product / responsible Company:
  Caesar & Loretz GmbH
  Herderstr. 31
  40721 Hilden
  Tel.: 02103/4994-0
  Fax: 02103/32360
  e-mail: info@caelo.de

- Emergency telephone:
  Giftinformationszentrum Mainz
  Langenbeckstr. 1, 55131 Mainz
  Tel.: 06131/19240

- Relevant identified uses of the substance or mixture and uses advised against:
  No further relevant information available.

- Application of the substance / mixture:
  Ingredient for pharmaceutical drugs or active pharmaceutical ingredient.

2 Hazards identification

- GHS-Labelling Elements:

- Signal word: Danger
- H-Phrases:
  H314 Causes severe skin burns and eye damage
  H410 Very toxic to aquatic life with long lasting effects
- P-Phrases:
  P273 Avoid release to the environment
  P280 Wear protective gloves/protective clothing/eye protection/face protection
  P301 IF SWALLOWED:
  P330 Rinse mouth
  P331 Do NOT induce vomiting
  P305 IF IN EYES:
  P351 Rinse continuously with water for several minutes
  P315 Get immediate medical advice/attention
Skin Corr. 1A
Aquatic Acute 1
Aquatic Chronic 1

3 Composition / information on ingredients

- Chemical characterization:
  CAS-No. Substance name
  76-03-9 Trichloroacetic acid
- EINECS-No.: 200-927-2
- Index-No.: 607-004-00-7
- REACH-Reg.-No.: 01-2119485186-30-0000
- INCI-Name: Trichloroacetic Acid

4 First aid measures

- after inhalation: Bring the person out of the contaminated area to fresh air, Seek medical help immediately. Show product-label or this MSDS.
- after skin contact: Take off contaminated clothes and shoes, wash immediately with plenty of water and soap, einen Arzt aufsuchen, auch wenn none unmittelbaren Symptome auftreten. Abtupfen mit Polyethylenglykol 400.
- after eye contact: Rinse out with plenty of water with the eyelid wide open und Arzt konsultieren, auch wenn none unmittelbaren Symptome auftreten.

5 Fire-fighting measures

- Suitable extinguishing media: All regular extinguishing media can be used. Select fire fighting measures suitable to surrounding environment.
- Specific hazards during fire fighting: Combustible but not flammable. In case of fire dangerous gases / vapours can be released: HCl, Phosgene, CO.
- Special protective equipment for fire-fighters: Suitable protective clothes and respiratory protection.
- Additional information: Prevent fire extinguishing water from contaminating surface water, the ground water system or soil. Residues must be deposited according to local regulations.

6 Accidental release measures

- Personal protective measures: Wear protective equipment. Keep away not protected persons.
- Environmental protective measures: Prevent from entering into surface water, the ground water system or soil.
- Methods for cleaning: Take up dry. Disposal according to Chapter 13 of this MSDS. Clean up with water.
7 Handling and storage

- **Handling:** No special requirements.
- **Storage:**
  - **Requirements for storage areas and containers:** Tightly closed. Store at a dry place. An gut belüftetem Ort. At room temperature (+15 to +25°C).

8 Exposure controls / personal protective equipment

- **Derived no effects level (DNEL)**
  - Worker DNEL, acute Systemic effects dermal 1,4 mg/kg
  - Worker DNEL, long time Systemic effects dermal 1,4 mg/kg
  - Worker DNEL, acute Systemic effects inhalative 124 mg/m³
  - Worker DNEL, long time Systemic effects inhalative 124 mg/m³
  - Consument DNEL, acute Systemic effects dermal 0,7 mg/kg
  - Consument DNEL, acute Systemic effects oral 0,7 mg/kg
  - Consument DNEL, long time Systemic effects dermal 0,7 mg/kg
  - Consument DNEL, long time Systemic effects oral 0,7 mg/kg
  - Consument DNEL, acute Systemic effects inhalative 61 mg/m³
  - Consument DNEL, long time Systemic effects inhalative 61 mg/m³

- **Personal protective equipment:**
  - **Respiratory protection:** Dust protection mask.
  - **Hand protection:** Protection gloves of rubber or nitrile rubber
  - **Eye protection:** Safety glasses.

9 Physical and chemical properties

- **Form:** solid
- **Colour:** white
- **Odour:** burning, acid
- **Melting point / melting range:** 54 - 56 °C
- **Boiling point / boiling range:** 197 °C
- **Flash point:** > 110 °C
- **Ignition temperature:** > 711 °C
- **Vapour pressure:** (20 °C) 1 hPa
- **Density:** (20 °C) 1.63 g/cm³
- **Solubility in / Miscibility with**
  - **Water:** (20 °C) 1300 g/l
  - **pH-range:** (50 g/l, 20 °C) < 1

10 Stability and reactivity

- **Thermical decomposition / conditions to avoid:** Decomposition above boiling point (> 200 °C).
- **Materials to avoid:** Alkalines, Strong oxidizers, metals
- **Hazardous decomposition products:** hydrogen chloride, Carbon monoxide, Carbon dioxide, Phosgene.
- **Additional information:** Hygroscopic.
11 Toxicological information

- **Acute toxicity:**
  
  LD/LD50-data relevant for hazard classification:
  
  76-03-9 Trichloroacetic acid
  Oral: LD50: 3320 mg/kg (rat)

- **Primary irritating effect:**
  
  - **on skin:** Strong burnings on skin and mucous membranes
  - **on eyes:** Strong burnings. Danger of blindness

- **Additional toxicological informations:** After swallowing strong burnings in mouth and on mouth and throat and danger of perforation of the esophagus and stomach

12 Ecological information

- **Predicted no-effect-concentration (PNEC)**
  
  - PNEC freshwater 0,00017 mg/l
  - PNEC seawater 0,000017 mg/l
  - PNEC periodic release in water 0,0027 mg/l
  - PNEC freshwater sediment 0,00014 mg/kg
  - PNEC sea sediment 0,000014 mg/kg
  - PNEC soil 0,0046 mg/kg
  - PNEC sewage plant 100 mg/l

- **Aquatic toxicity:**
  
  Biodegradation: 59%/20d. Not readily biodegradable.
  Fishes (Leuciscus idus): LC50: > 1000 mg/l/48h
  Arthropodes (Daphnia magna): EC50: 110 mg/l/48h
  Bacteria (pseudomonas putida): EC10: 2000 mg/l
  Toxic concentration limit: Pseudomonas putida EC5: < 1000 mg/l/16h

- **Remark:** Harmful effect due to pH-shifting.

- **General advices:** Don not release into ground water, surface waters or drainage, even not in small quantities. Danger for drinking water even if small quantities are released into soil. In water toxic for fishes, very toxic for water organisms.

- **log P(o/w):** 1,33 (OECD 107)

- **Water hazard class:** 2 (VwVwS): hazardous for water.

13 Disposal considerations

- **Product:**
  
  - **Recommendation:** Disposal according to local regulations as pharmaceutical waste or organic laboratory chemicals.

- **Empty contaminated packaging:**
  
  - **Recommendation:** Disposal according to the local regulations.

14 Transport informations

- **Land transport according to ADR:**

- **Proper shipping name:** Trichloroacetic acid

- **Class:** 8
Material Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
Trichoressigsäure cryst.

· UN-number: 1839
· Packing group: II
· Classification code: C4
· Limited quantities (Table 3.4.6. ADR): 1kg
· Hazard classification number: 80
· Special provisions (Chapter 3.3 ADR): -
· Additional informations for sea transport IMDG:
  · EMS-No.: F-A, S-B
· Properties: -

15 Regulatory information

· Labelling according to actual legislation (GHS, Globally Harmonized System of Classification and Labelling of Chemicals):
The product is classified and labelled according to GHS-regulations.
  · Hazard symbols: GHS05, GHS09
  · Signal word: Danger
  · H-Phrases:
    H314 Causes severe skin burns and eye damage
    H410 Very toxic to aquatic life with long lasting effects
  · P-Phrases:
    P273 Avoid release to the environment
    P280 Wear protective gloves/protective clothing/eye protection/face protection
    P301 IF SWALLOWED:
    P330 Rinse mouth
    P331 Do NOT induce vomiting
    P305 IF IN EYES:
    P351 Rinse continuously with water for several minutes
    P315 Get immediate medical advice/attention
  · National regulations (Germany):
    · Water hazard class: see chapter 12
    · Storage class TRGS 510: 8A

16 Other Information

The information provided in this MSDS is correct to the best of our knowledge at the date of edition.

· Reason for last revision: Adjustment to regulation (EC) 1907/2006 (REACH) and GHS-labelling system.