

## Dichloroacetic acid

Version number: GHS 1.0

Date of compilation: 2019-01-30

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Identification of the substance

**Dichloroacetic acid**

Registration number (REACH)

this information is not available

CAS number

79-43-6

Alternative name(s)

Dichloroacetic acid, 2,2-dichloroacetic acid

Article number

A0216122

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

Relevant identified uses

General use

Uses advised against

Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin.

#### 1.3 Details of the supplier of the safety data sheet

Chemos GmbH & Co. KG  
Sonnenring 7  
84032 Altdorf  
Germany

Telephone: +49 871-966346-0  
Telefax: +49 871-966346-13  
e-mail: chemos@chemos.de  
Website: <http://www.chemos.de/>

e-mail (competent person)

chemos@chemos.de

#### 1.4 Emergency telephone number

Emergency information service

This number is only available during the following office hours: Mon - Thu 08:00 AM - 05:00 PM, Fri 08:00 AM - 12:00 PM

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

| Section | Hazard class  | Category | Hazard class and category | Hazard statement |
|---------|---|----------|---------------------------|------------------|
| 3.2     | skin corrosion/irritation                           | 1A       | Skin Corr. 1A             | H314             |
| 4.1A    | hazardous to the aquatic environment - acute hazard | 1        | Aquatic Acute 1           | H400             |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word danger

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### - Pictograms

GHS05, GHS09



### - Hazard statements

H314 Causes severe skin burns and eye damage.  
H400 Very toxic to aquatic life.

### - Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
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.  
P391 Collect spillage.  
P501 Dispose of contents/container to industrial combustion plant.

## 2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                   |  |
|-------------------|--|
| Name of substance | dichloroacetic acid  |
| Identifiers       |  |
| CAS No            | 79-43-6  |
| EC No             | 201-207-0  |
| Index No          | 607-066-00-5   |
| Molecular formula | C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub> O <sub>2</sub> |
| Molar mass        | 128.9 g/mol  |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

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Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

### 4.3 Indication of any immediate medical attention and special treatment needed

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media

Water jet

### 5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen chloride (HCl)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

### 6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

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Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

### 7.2 Conditions for safe storage, including any incompatibilities

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

See section 16 for a general overview.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

This information is not available.

#### Human health values

| Relevant DNELs and other threshold levels |                         |                                    |                   |                            |
|---|-------------------------|------------------------------------|-------------------|----------------------------|
| Endpoint                                  | Threshold level         | Protection goal, route of exposure | Used in           | Exposure time              |
| DNEL                                      | 0.081 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| DNEL                                      | 0.028 mg/kg bw/day      | human, dermal                      | worker (industry) | chronic - systemic effects |

#### Environmental values

| Relevant PNECs and other threshold levels |                 |                       |                              |                              |
|---|-----------------|-----------------------|------------------------------|------------------------------|
| Endpoint                                  | Threshold level | Organism              | Environmental compartment    | Exposure time                |
| PNEC                                      | 106 µg/l        | aquatic organisms     | freshwater                   | short-term (single instance) |
| PNEC                                      | 10.6 µg/l       | aquatic organisms     | marine water                 | short-term (single instance) |
| PNEC                                      | 1,225 mg/l      | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| PNEC                                      | 0.405 mg/kg     | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| PNEC                                      | 0.041 mg/kg     | aquatic organisms     | marine sediment              | short-term (single instance) |
| PNEC                                      | 0.019 mg/kg     | terrestrial organisms | soil                         | short-term (single instance) |

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### 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

|                |                |
|----------------|----------------|
| Physical state | liquid         |
| Colour         | various        |
| Odour          | characteristic |

#### Other safety parameters

|   |                                  |
|---|----------------------------------|
| pH (value)                              | not determined                   |
| Melting point/freezing point            | 13.5 °C                          |
| Initial boiling point and boiling range | ≥193 – ≤194 °C                   |
| Flash point                             | >195.5 °C at 1,013 hPa           |
| Evaporation rate                        | not determined                   |
| Flammability (solid, gas)               | not relevant, (fluid)            |
| Explosive limits                        | not determined                   |
| Vapour pressure                         | 19 Pa at 20 °C                   |
| Density                                 | 1.563 g/cm <sup>3</sup> at 20 °C |

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|                                       |                                   |
|---------------------------------------|-----------------------------------|
| Vapour density                        | this information is not available |
| Solubility(ies)                       | not determined                    |
| Partition coefficient                 |                                   |
| - n-octanol/water (log KOW)           | 0.52 (ECHA)                       |
| - Soil organic carbon/water (log KOC) | 0.353 (ECHA)                      |
| Auto-ignition temperature             | not determined                    |
| Viscosity                             | not determined                    |
| Explosive properties                  | none                              |
| Oxidising properties                  | none                              |

### 9.2 Other information

|                 |       |
|-----------------|-------|
| Solvent content | 100 % |
|-----------------|-------|

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

Oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification according to GHS (1272/2008/EC, CLP)

##### Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful if swallowed.

##### Skin corrosion/irritation

Causes severe skin burns and eye damage.

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Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### SECTION 12: Ecological information

#### 12.1 Toxicity

Very toxic to aquatic life.

| Aquatic toxicity (acute) |            |                       |               |
|--------------------------|------------|-----------------------|---------------|
| Endpoint                 | Value      | Species               | Exposure time |
| EC50                     | 2,600 mg/l | aquatic invertebrates | 24 h          |

#### 12.2 Persistence and degradability

| Process of degradability |                  |      |
|--------------------------|------------------|------|
| Process                  | Degradation rate | Time |
| oxygen depletion         | 93 %             | 15 d |

#### 12.3 Bioaccumulative potential

Data are not available.

|                           |             |
|---------------------------|-------------|
| n-octanol/water (log KOW) | 0.52 (ECHA) |
|---------------------------|-------------|

#### 12.4 Mobility in soil

Data are not available.

|  |              |
|--|--------------|
| The Organic Carbon normalised adsorption coefficient | 0.353 (ECHA) |
|--|--------------|

#### 12.5 Results of PBT and vPvB assessment

Data are not available.

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### 12.6 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packageings

It is a dangerous waste; only packageings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

## SECTION 14: Transport information

- |  |   |
|--|---|
| <b>14.1 UN number</b>  | 1764                                    |
| <b>14.2 UN proper shipping name</b>  | DICHLOROACETIC ACID                     |
| <b>14.3 Transport hazard class(es)</b>   |   |
| Class  | 8 (corrosive substances)                |
| <b>14.4 Packing group</b>  | II (substance presenting medium danger) |
| <b>14.5 Environmental hazards</b>  | hazardous to the aquatic environment    |
| <b>14.6 Special precautions for user</b>                                       |   |
| Provisions for dangerous goods (ADR) should be complied within the premises.   |   |
| <b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b> |   |
| The cargo is not intended to be carried in bulk.                               |   |

### Information for each of the UN Model Regulations

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

|                      |                     |
|----------------------|---------------------|
| UN number            | 1764                |
| Proper shipping name | DICHLOROACETIC ACID |
| Class                | 8                   |
| Classification code  | C3                  |
| Packing group        | II                  |
| Danger label(s)      | 8, fish and tree    |



|                          |  |
|--------------------------|--|
| Environmental hazards    | yes (hazardous to the aquatic environment) |
| Excepted quantities (EQ) | E2   |
| Limited quantities (LQ)  | 1 L  |
| Transport category (TC)  | 2  |



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|   |  |
|---|--|
| Tunnel restriction code (TRC)                             | E  |
| Hazard identification No                                  | 80   |
| Emergency Action Code                                     | 2X   |
| <b>International Maritime Dangerous Goods Code (IMDG)</b> |  |
| UN number   | 1764                                       |
| Proper shipping name                                      | DICHLOROACETIC ACID                        |
| Class   | 8  |
| Marine pollutant  | yes (hazardous to the aquatic environment) |
| Packing group   | II   |
| Danger label(s)   | 8, fish and tree                           |



|                          |           |
|--------------------------|-----------|
| Special provisions (SP)  | -         |
| Excepted quantities (EQ) | E2        |
| Limited quantities (LQ)  | 1 L       |
| EmS                      | F-A, S-B  |
| Stowage category         | A         |
| Segregation group        | 1 - Acids |

### International Civil Aviation Organization (ICAO-IATA/DGR)

|                       |  |
|-----------------------|--|
| UN number             | 1764                                       |
| Proper shipping name  | Dichloroacetic acid                        |
| Class                 | 8  |
| Environmental hazards | yes (hazardous to the aquatic environment) |
| Packing group         | II   |
| Danger label(s)       | 8  |



|                          |       |
|--------------------------|-------|
| Excepted quantities (EQ) | E2    |
| Limited quantities (LQ)  | 0,5 L |

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### Deco-Paint Directive (2004/42/EC)

|             |       |
|-------------|-------|
| VOC content | 100 % |
|-------------|-------|

##### Directive on industrial emissions (VOCs, 2010/75/EU)

|             |       |
|-------------|-------|
| VOC content | 100 % |
|-------------|-------|

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### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information

### Abbreviations and acronyms

| Abbr.    | Descriptions of used abbreviations  |
|----------|---|
| ADN      | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR      | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)                                       |
| CAS      | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| CLP      | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures  |
| DGR      | Dangerous Goods Regulations (see IATA/DGR)  |
| DNEL     | Derived No-Effect Level   |
| EC No    | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)                                     |
| EINECS   | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS   | European List of Notified Chemical Substances   |
| EmS      | Emergency Schedule  |
| GHS      | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA     | International Air Transport Association   |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO     | International Civil Aviation Organization   |
| IMDG     | International Maritime Dangerous Goods Code   |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| MARPOL   | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")   |
| NLP      | No-Longer Polymer   |
| PBT      | Persistent, Bioaccumulative and Toxic   |
| PNEC     | Predicted No-Effect Concentration   |
| REACH    | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| RID      | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)   |
| VOC      | Volatile Organic Compounds  |
| vPvB     | Very Persistent and very Bioaccumulative  |

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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### List of relevant phrases (code and full text as stated in chapter 2 and 3)

| Code | Text                                     |
|------|--|
| H314 | Causes severe skin burns and eye damage. |
| H400 | Very toxic to aquatic life.              |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.