

## Fulvic acid

Version number: GHS 1.1

Date of compilation: 2020-11-13

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

#### 1.1 Product identifier

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Identification of the substance | <b>Fulvic acid</b>                |
| Registration number (REACH)     | this information is not available |
| CAS number                      | 479-66-3                          |
| Article number                  | A0005172                          |

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

|                          |             |
|--------------------------|-------------|
| Relevant identified uses | General use |
|--------------------------|-------------|

#### 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](mailto:chemos@chemos.de)  
Website: <http://www.chemos.de/>

e-mail (competent person) [chemos@chemos.de](mailto:chemos@chemos.de)

#### 1.4 Emergency telephone number

Emergency information service +49 89 1 92 40

| Poison centre  |                                                               |                      |                   |         |
|----------------|---------------------------------------------------------------|----------------------|-------------------|---------|
| Country        | Name                                                          | Postal code/<br>city | Telephone         | Telefax |
| United Kingdom | National Poison Information Centre<br>Medical Toxicology Unit | SE14 5ER Lon-<br>don | +44 171 635 91 91 |         |

### 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 cat-<br>egory | Hazard state-<br>ment |
|---------|--------------------------------------------------------------------------------------|----------|--------------------------------|-----------------------|
| 3.1O    | acute toxicity (oral)                                                                | 4        | Acute Tox. 4                   | H302                  |
| 3.1D    | acute toxicity (dermal)                                                              | 4        | Acute Tox. 4                   | H312                  |
| 3.8R    | specific target organ toxicity - single exposure (respirat-<br>ory tract irritation) | 3        | STOT SE 3                      | H335                  |

For full text of abbreviations: see SECTION 16.

#### 2.2 Label elements

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

- Signal word            warning

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### - Pictograms

GHS07



### - Hazard statements

H302+H312 Harmful if swallowed or in contact with skin.  
H335 May cause respiratory irritation.

### - Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P312 Call a POISON CENTRE/doctor if you feel unwell.  
P321 Specific treatment (see on this label).  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
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 | Fulvic acid                                    |
| Identifiers       |                                                |
| CAS No            | 479-66-3                                       |
| Molecular formula | C <sub>14</sub> H <sub>12</sub> O <sub>8</sub> |
| Molar mass        | 308.2 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

Rinse skin with water/shower.

#### 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.

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### 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, Foam, ABC-powder

Unsuitable extinguishing media

Water jet

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

Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 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.

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

Advice on how to contain a spill

Covering of drains, Take up mechanically

Advice on how to clean up a spill

Take up mechanically.

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.

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### 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. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

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

Managing of associated risks

- Explosive atmospheres

Removal of dust deposits.

- Ventilation requirements

Use local and general ventilation.

#### 7.3 Specific end use(s)

See section 16 for a general overview.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

| Occupational exposure limit values (Workplace Exposure Limits) |               |        |            |           |             |            |              |                 |                   |          |           |
|----------------------------------------------------------------|---------------|--------|------------|-----------|-------------|------------|--------------|-----------------|-------------------|----------|-----------|
| Country                                                        | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Ceiling-C [ppm] | Ceiling-C [mg/m³] | Notation | Source    |
| GB                                                             | dust          |        | WEL        |           | 10          |            |              |                 |                   | i        | EH40/2005 |
| GB                                                             | dust          |        | WEL        |           | 4           |            |              |                 |                   | r        | EH40/2005 |

Notation

Ceiling-C

i

r

STEL

TWA

ceiling value is a limit value above which exposure should not occur

inhalable fraction

respirable fraction

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours  
time-weighted average (unless otherwise specified)

#### 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

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### Skin protection

#### - Hand protection

In the case of wanting to use the gloves again, clean them before taking off and air them well.

#### - Other protection measures

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

### Respiratory protection

Particulate filter device (EN 143).

### 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 | solid          |
| Colour         | various        |
| Odour          | characteristic |

#### Other safety parameters

|                                         |                                                           |
|-----------------------------------------|-----------------------------------------------------------|
| pH (value)                              | not applicable                                            |
| Melting point/freezing point            | 247 °C                                                    |
| Initial boiling point and boiling range | not determined                                            |
| Flash point                             | not applicable                                            |
| Evaporation rate                        | not determined                                            |
| Flammability (solid, gas)               | this material is combustible, but will not ignite readily |
| Explosion limits of dust clouds         | not determined                                            |
| Vapour pressure                         | not determined                                            |
| Density                                 | not determined                                            |
| Vapour density                          | this information is not available                         |
| Relative density                        | information on this property is not available             |
| Solubility(ies)                         | not determined                                            |

#### Partition coefficient

|                             |                                   |
|-----------------------------|-----------------------------------|
| - n-octanol/water (log KOW) | this information is not available |
|-----------------------------|-----------------------------------|

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|                           |                             |
|---------------------------|-----------------------------|
| Auto-ignition temperature | not determined              |
| Viscosity                 | not relevant (solid matter) |
| Explosive properties      | none                        |
| Oxidising properties      | none                        |

### 9.2 Other information

|               |       |
|---------------|-------|
| Solid 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.

Hints to prevent fire or explosion

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

### 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

Harmful if swallowed. Harmful in contact with skin.

- Acute toxicity estimate (ATE)

|        |             |
|--------|-------------|
| Oral   | 500 mg/kg   |
| Dermal | 1,100 mg/kg |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

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### 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

May cause respiratory irritation.

### 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

Shall not be classified as hazardous to the aquatic environment.

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 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/packagegings

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.

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### SECTION 14: Transport information

- 14.1 UN number** not subject to transport regulations
- 14.2 UN proper shipping name** not relevant
- 14.3 Transport hazard class(es)** none
- 14.4 Packing group** not assigned to a packing group
- 14.5 Environmental hazards** non-environmentally hazardous acc. to the dangerous goods regulations
- 14.6 Special precautions for user**  
There is no additional information.
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**  
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)

Not subject to ADR, RID and ADN.

##### International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

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

Not subject to ICAO-IATA.

### 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 | 0 % |
|-------------|-----|

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

|             |     |
|-------------|-----|
| VOC content | 0 % |
|-------------|-----|

#### National inventories

| Country | Inventory | Status              |
|---------|-----------|---------------------|
| NZ      | NZIoC     | substance is listed |
| TW      | TCSI      | substance is listed |

#### Legend

NZIoC New Zealand Inventory of Chemicals  
TCSI Taiwan Chemical Substance Inventory

- 15.2 Chemical Safety Assessment**

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

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### 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)                                                                                                                |
| Ceiling-C | Ceiling value                                                                                                                                                                                                         |
| CLP       | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures                                                                                                                    |
| DGR       | Dangerous Goods Regulations (see IATA/DGR)                                                                                                                                                                            |
| EH40/2005 | EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )                                 |
| 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                                                                                                                                                                           |
| MARPOL    | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")                                                                                                                     |
| PBT       | Persistent, Bioaccumulative and Toxic                                                                                                                                                                                 |
| ppm       | Parts per million                                                                                                                                                                                                     |
| 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)                                               |
| STEL      | Short-term exposure limit                                                                                                                                                                                             |
| TWA       | Time-weighted average                                                                                                                                                                                                 |
| VOC       | Volatile Organic Compounds                                                                                                                                                                                            |
| vPvB      | Very Persistent and very Bioaccumulative                                                                                                                                                                              |
| WEL       | Workplace exposure limit                                                                                                                                                                                              |

#### 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                              |
|------|-----------------------------------|
| H302 | Harmful if swallowed.             |
| H312 | Harmful in contact with skin.     |
| H335 | May cause respiratory irritation. |

### Disclaimer

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