

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Coffee Machine Cleaning Granulate

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

Relevant identified uses of the substance or mixture:

Cleaner

Sector of use [SU]:

SU21 - Consumer uses: Private households (=general public = consumers)

Chemical product category [PC]:

PC35 - Washing and cleaning products (including solvent based products)

Environmental Release Category [ERC]:

ERC 8a - Wide dispersive indoor use of processing aids in open systems

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

lujoCLEAN cleaning products, Weidenstrasse 13, D-82386 Huglfing

Tel. +49 (0)88 02 - 913 747 -0 Fax. +49 (0)88 02 - 913 747 -1

www.lujoclean.com - info@lujoclean.com

Qualified person's e-mail address: info@lujoclean.com Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0)1 78 538 16 76 (GER)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)

| Hazard class | Hazard category | Hazard statement |
|--------------|-----------------|-------------------------------------|
| Eye Irrit. | 2 | H319-Causes serious eye irritation. |

2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments)

Xi, Irritant, R36

2.2 Label elements

2.2.1 Labeling according to Regulation (EC) 1272/2008 (CLP)



Warning

Hazard statement

H319-Causes serious eye irritation.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.

Prevention

P280-Wear eye protection.

Response

P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313-If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006.

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

| Sodium carbonate | |
|---|--|
| Registration number (REACH) | 01-2119485498-19-XXXX |
| Index | 011-005-00-2 |
| EINECS, ELINCS, NLP | 207-838-8 |
| CAS | CAS 497-19-8 |
| content % | 20-30 |
| Classification according to Directive 67/548/EEC | Irritant, Xi, R36 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Eye Irrit. 2, H319 |
| Sodium carbonate peroxohydrate | |
| Substance with specific conc. limit(s) acc. to REACH-registration | |
| Registration number (REACH) | 01-2119457268-30-XXXX |
| Index | --- |
| EINECS, ELINCS, NLP | 239-707-6 |
| CAS | CAS 15630-89-4 |
| content % | 10-<25 |
| Classification according to Directive 67/548/EEC | Oxidizing, O, R8 Harmful, Xn, R22 Irritant, Xi, R41 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Ox. Sol. 3, H272 Acute Tox. 4, H302 Eye Dam. 1, H318 |
| Citric acid | |
| Registration number (REACH) | 01-2119457026-42-XXXX |
| Index | --- |
| EINECS, ELINCS, NLP | 201-069-1 |
| CAS | CAS 77-92-9 |
| content % | 10-20 |
| Classification according to Directive 67/548/EEC | Irritant, Xi, R36 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Eye Irrit. 2, H319 |
| Silicic acid, sodium salt | |
| Registration number (REACH) | 01-2119448725-31-XXXX |
| Index | --- |
| EINECS, ELINCS, NLP | 215-687-4 |

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| | |
|--|--|
| CAS | CAS 1344-09-8 |
| content % | 1-5 |
| Classification according to Directive 67/548/EEC | Irritant, Xi, R36/37/38 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 |

| | |
|--|--|
| (1-hydroxyethylidene)bisphosphonic acid, sodium salt | |
| Registration number (REACH) | 01-2119510382-52-XXXX |
| Index | --- |
| EINECS, ELINCS, NLP | 249-559-4 |
| CAS | CAS 29329-71-3 |
| content % | 1-2,5 |
| Classification according to Directive 67/548/EEC | Harmful, Xn, R22 Irritant, Xi, R36 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Acute Tox. 4, H302 Eye Irrit. 2, H319 |

For the text of the R-phrases / H-phrases and classification codes (GHS/CLP), see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation

Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.

Give copious water to drink - consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

With long-term contact:

Dermatitis (skin inflammation)

On dust formation:

Coughing

Irritation of the respiratory tract

Irritant to mucosa of the nose and throat

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Adapt to the nature and extent of fire.

Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media

None known

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Oxides of phosphorus

Toxic gases

5.3 Advice for firefighters

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In case of fire and/or explosion do not breathe fumes.
 Protective respirator with independent air supply.
 According to size of fire
 Full protection, if necessary
 Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid build up of dust.
 Ensure sufficient supply of air.
 Avoid contact with eyes or skin.
 Contact with water - danger of sliding.

6.2 Environmental precautions

Prevent surface and ground-water infiltration, as well as ground penetration.
 Prevent from entering drainage system.
 If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Pick up mechanically and dispose of according to Section 13.
 Flush residue using copious water.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Avoid build up of dust.
 Avoid contact with eyes.
 Avoid long lasting or intensive contact with skin.
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
 Observe directions on label and instructions for use.
 Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
 Store product closed and only in original packing.
 Not to be stored in gangways or stair wells.
 Protect from humidity.
 Store at room temperature.

7.3 Specific end use(s)

Cleaning product

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Chemical Name | general dust limit | Content %: |
|---|------------------------|------------|
| WEL-TWA: 10 mg/m ³ (inhal. dust), 4 mg/m ³ (respir. dust) | WEL-STEL: --- | --- |
| BMGV: --- | Other information: --- | |

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period)
 EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term
 exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert"



(biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

| Sodium carbonate | | | | | | |
|---------------------|--|--------------------------|------------|-------|-------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 10 | mg/m3 | |

| Sodium carbonate peroxohydrate | | | | | | |
|--------------------------------|--|---------------------------|------------|-------|--------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Workers / employees | Human - dermal | Short term, local effects | DNEL | 12,8 | mg/cm2 | |
| Workers / employees | Human - dermal | Long term, local effects | DNEL | 12,8 | mg/cm2 | |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 5 | mg/m3 | |
| Consumer | Human - dermal | Short term, local effects | DNEL | 6,4 | mg/cm2 | |
| Consumer | Human - dermal | Long term, local effects | DNEL | 6,4 | mg/cm2 | |
| | Environment - freshwater | | PNEC | 0,035 | mg/l | |
| | Environment - marine | | PNEC | 0,035 | mg/l | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 0,035 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 16,24 | mg/l | |

| Silicic acid, sodium salt | | | | | | |
|---------------------------|--|-----------------------------|------------|-------|--------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 5,61 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 1,59 | mg/kg bw/day | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 0,8 | mg/kg bw/day | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 1,38 | mg/m3 | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 0,8 | mg/kg bw/day | |
| | Environment - freshwater | | PNEC | 7,5 | mg/l | |
| | Environment - marine | | PNEC | 1 | mg/l | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 7,5 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 348 | mg/l | |

| Citric acid | | | | | | |
|---------------------|--|------------------|------------|-------|------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| | Environment - freshwater | | PNEC | 0,44 | mg/l | |



| | | | | | | |
|--|--------------------------------------|--|------|-------|----------|--|
| | Environment - marine | | PNEC | 0,044 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 1000 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 34,6 | mg/kg dw | |
| | Environment - sediment, marine | | PNEC | 3,46 | mg/kg dw | |
| | Environment - soil | | PNEC | 33,1 | mg/kg dw | |

| (1-hydroxyethylidene)bisphosphonic acid, sodium salt | | | | | | |
|--|--|------------------|------------|--------|------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Workers / employees | Human - oral | Long term | DNEL | 13 | mg/kg bw/d | |
| Consumer | Human - oral | Long term | DNEL | 6,5 | mg/kg bw/d | |
| | Environment - freshwater | | PNEC | 0,136 | mg/l | |
| | Environment - marine | | PNEC | 0,0136 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 59 | mg/kg | |
| | Environment - sediment, marine | | PNEC | 5,9 | mg/kg | |
| | Environment - soil | | PNEC | 96 | mg/kg | |
| | Environment - sewage treatment plant | | PNEC | 20 | mg/l | |
| | Environment - oral (animal feed) | | PNEC | 12 | mg/kg | |

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

With danger of contact with eyes.

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Normally not necessary.

With long-term contact:

If applicable

Rubber gloves (EN 374).

Safety gloves made of butyl (EN 374)

Protective nitrile gloves (EN 374)

Minimum layer thickness in mm:

0,5

Permeation time (penetration time) in minutes:

>= 480

The breakthrough times determined in accordance with EN 374 Part III were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Usual protective working garments

Respiratory protection:

Normally not necessary.

If the general dust-limit is exceeded, breathing masks with fine-dust filters are necessary (EN 143), code colour white.

If applicable, filter P 2 (EN 143), code colour white

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---------------------------|
| Physical state: | Solid, Tabs |
| Colour: | White |
| Odour: | Characteristic |
| Odour threshold: | Not determined |
| pH-value: | 10 (1 %) |
| Melting point/freezing point: | Not determined |
| Initial boiling point and boiling range: | Not determined |
| Flash point: | n.a. |
| Evaporation rate: | n.a. |
| Flammability (solid, gas): | Not determined |
| Lower explosive limit: | Not determined |
| Upper explosive limit: | Not determined |
| Vapour pressure: | n.a. |
| Vapour density (air = 1): | n.a. |
| Density: | Not determined |
| Bulk density: | n.a. |
| Solubility(ies): | Not determined |
| Water solubility: | Soluble |
| Partition coefficient (n-octanol/water): | Not determined |
| Auto-ignition temperature: | n.a. |
| Decomposition temperature: | Not determined |
| Viscosity: | n.a. |
| Explosive properties: | Product is not explosive. |
| Oxidising properties: | No, Analogous conclusion |

9.2 Other information

| | |
|---------------------------|-------------------------|
| Miscibility: | Not determined |
| Fat solubility / solvent: | Not determined |
| Conductivity: | Not determined |
| Surface tension: | Not determined |
| Solvents content: | 0 % (Organic solvents) |

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

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10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

See also section 7.

Protect from humidity.

10.5 Incompatible materials

See also section 7.

Bases

Acids

Reducing agent

10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

SECTION 11: Toxicological information

Possibly more information on health effects, see Section 2.1 (classification).

Coffee Machine Cleaning Tablet

| Toxicity/effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|---|----------|-------|-------|----------|-------------|--|
| Acute toxicity, by oral route: | ATE | >2000 | mg/kg | | | calculated value |
| Acute toxicity, by dermal route: | | | | | | n.d.a. |
| Acute toxicity, by inhalation: | | | | | | n.d.a. |
| Skin corrosion/irritation: | | | | | | n.d.a. |
| Serious eye damage/irritation: | | | | | | n.d.a. |
| Respiratory or skin sensitisation: | | | | | | n.d.a. |
| Germ cell mutagenicity: | | | | | | n.d.a. |
| Carcinogenicity: | | | | | | n.d.a. |
| Reproductive toxicity: | | | | | | n.d.a. |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | n.d.a. |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | n.d.a. |
| Aspiration hazard: | | | | | | n.d.a. |
| Respiratory tract irritation: | | | | | | n.d.a. |
| Repeated dose toxicity: | | | | | | n.d.a. |
| Symptoms: | | | | | | n.d.a. |
| Other information: | | | | | | Classification according to calculation procedure. |

Sodium carbonate

| Toxicity/effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|------------------------------------|----------|-------|---------|----------|--------------------------------------|-----------------|
| Acute toxicity, by oral route: | LD50 | 2800 | mg/kg | Rat | | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | | |
| Acute toxicity, by inhalation: | LD50 | 2,3 | mg/l/2h | Rat | OECD 403 (Acute Inhalation Toxicity) | |
| Skin corrosion/irritation: | | | | Rabbit | | Not irritant |
| Serious eye damage/irritation: | | | | Rabbit | | Irritant |
| Respiratory or skin sensitisation: | | | | | | Not sensitizing |
| Germ cell mutagenicity (in vitro): | | | | | | Negative |

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| | | | | | | |
|-----------------|--|--|--|--|--|--|
| Symptoms: | | | | | | diarrhoea, vomiting, mucous membrane irritation, nausea, lower abdominal pain |
| Teratogenicity: | | | | | | Negative |

| Sodium carbonate peroxohydrate | | | | | | |
|------------------------------------|----------|-------|-------|------------|---|--|
| Toxicity/effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | 1034 | mg/kg | Rat | | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | |
| Skin corrosion/irritation: | | | | Rabbit | | Not irritant |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Risk of serious damage to eyes., Corrosive |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | Not sensitizing |
| Symptoms: | | | | | | mucous membrane irritation |

| Citric acid | | | | | | |
|------------------------------------|----------|-------|-------|----------|--|--|
| Toxicity/effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | 3000 | mg/kg | Rat | | |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Slightly irritant |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Irritant |
| Respiratory or skin sensitisation: | | | | | | No indications of such an effect. |
| Respiratory or skin sensitisation: | | | | | | No indications of such an effect. |
| Germ cell mutagenicity (in vitro): | | | | | | Negative |
| Carcinogenicity: | | | | | | Negative |
| Reproductive toxicity: | | | | | | Negative |
| Symptoms: | | | | | | vomiting, cornea opacity, coughing, stomach pain, mucous membrane irritation |

| Silicic acid, sodium salt | | | | | | |
|---|----------|-------|------------|----------|-------------|--|
| Toxicity/effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | >2000 | mg/kg | Rat | | |
| Acute toxicity, by dermal route: | LD50 | >5000 | mg/kg | Rat | | |
| Acute toxicity, by inhalation: | LC50 | >2060 | mg/m3 | Rat | | |
| Skin corrosion/irritation: | | | | | | Irritant |
| Serious eye damage/irritation: | | | | | | Irritant |
| Specific target organ toxicity - repeated exposure (STOT-RE): | NOAEL | >159 | mg/kg bw/d | Rat | | |
| Respiratory tract irritation: | | | | | | Irritant |
| Symptoms: | | | | | | respiratory distress, coughing, mucous membrane irritation |

(1-hydroxyethylidene)bisphosphonic acid, sodium salt

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| Toxicity/effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|------------------------------------|----------|-------|-------|----------|-------------|--------------|
| Acute toxicity, by oral route: | LD50 | 1100 | mg/kg | Rat | | |
| Skin corrosion/irritation: | | | | | | Not irritant |
| Serious eye damage/irritation: | | | | | | Irritant |
| Respiratory or skin sensitisation: | | | | | | Negative |

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

| Coffee Machine Cleaning Tablet | | | | | | | |
|-------------------------------------|----------|------|-------|------|----------|-------------|--|
| Toxicity/effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | | | | | | | n.d.a. |
| Toxicity to daphnia: | | | | | | | n.d.a. |
| Toxicity to algae: | | | | | | | n.d.a. |
| Persistence and degradability: | | | | | | | The surfactant(s) contained in this mixture complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents., Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer. |
| Bioaccumulative potential: | | | | | | | n.d.a. |
| Mobility in soil: | | | | | | | n.d.a. |
| Results of PBT and vPvB assessment: | | | | | | | n.d.a. |
| Other adverse effects: | | | | | | | n.d.a. |

| Sodium carbonate | | | | | | | |
|-------------------------------------|----------|------|-------|------|---------------------|-------------|--|
| Toxicity/effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | LC50 | 96h | 300 | mg/l | Lepomis macrochirus | | |
| Toxicity to daphnia: | EC50 | 96h | 265 | mg/l | Daphnia magna | | |
| Persistence and degradability: | | | | | | | Not relevant for inorganic substances. |
| Bioaccumulative potential: | | | | | | | No bioaccumulation. |
| Results of PBT and vPvB assessment: | | | | | | | No PBT substance, No vPvB substance |
| Water solubility: | | | 215 | g/l | | | 20°C |

| Sodium carbonate peroxohydrate | | | | | | | |
|--------------------------------|-----------|------|-------|------|---------------------|-------------|-------|
| Toxicity/effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | LC50 | 96h | 70,7 | mg/l | Pimephales promelas | | |
| Toxicity to daphnia: | NOEC/NOEL | 48h | 2 | mg/l | Daphnia pulex | | |

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| | | | | | | | |
|----------------------------|------|-------|-----|------|------------------|--|---------------------|
| Bioaccumulative potential: | | | | | | | No bioaccumulation. |
| Toxicity to bacteria: | EC50 | 30min | 466 | mg/l | activated sludge | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) | |

| Citric acid | | | | | | | |
|--------------------------------|----------|------|---------|------|--------------------|---|--------------------|
| Toxicity/effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | LC50 | 96h | 440-706 | mg/l | | | |
| Toxicity to daphnia: | EC50 | 72h | ~120 | mg/l | Daphnia magna | IUCLID Chem. Data Sheet (ESIS) | |
| Persistence and degradability: | | 24h | > 98 | % | | OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test) | |
| Bioaccumulative potential: | | | | | | | Not to be expected |
| Toxicity to bacteria: | EC5 | | >10000 | mg/l | Pseudomonas putida | | |
| Other information: | BOD5 | | 526 | mg/g | | | |
| Other information: | COD | | 728 | mg/g | | | |
| Water solubility: | | | 605 | g/l | | | Soluble 20°C |

| Silicic acid, sodium salt | | | | | | | |
|---------------------------|----------|------|-------|------|-------------------|--------------------------------------|-------|
| Toxicity/effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | LC50 | 96h | >100 | mg/l | Brachydanio rerio | OECD 203 (Fish, Acute Toxicity Test) | |
| Toxicity to daphnia: | EC50 | 48h | >100 | mg/l | Daphnia magna | | |
| Toxicity to bacteria: | EC0 | 48h | >1000 | mg/l | | | |

| (1-hydroxyethylidene)bisphosphonic acid, sodium salt | | | | | | | |
|--|----------|------|-------|------|---------------------|-------------|-------------------------------------|
| Toxicity/effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Toxicity to fish: | LC50 | 96h | >100 | mg/l | Oncorhynchus mykiss | | |
| Toxicity to daphnia: | EC50 | 96h | >170 | mg/l | Daphnia magna | | |
| Results of PBT and vPvB assessment: | | | | | | | No PBT substance, No vPvB substance |

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)

20 01 29 detergents containing dangerous substances

Recommendation:

Pay attention to local and national official regulations

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

For contaminated packing material

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Pay attention to local and national official regulations
 Empty container completely.
 Uncontaminated packaging can be recycled.
 Dispose of packaging that cannot be cleaned in the same manner as the substance.
 Recommended cleaner:
 Water

SECTION 14: Transport information

General statements

UN number: n.a.

Transport by road/by rail (ADR/RID)

UN proper shipping name:

Transport hazard class(es): n.a.

Packing group: n.a.

Classification code: n.a.

LQ (ADR 2013): n.a.

LQ (ADR 2009): n.a.

Environmental hazards: Not applicable

Tunnel restriction code:

Transport by sea (IMDG-code)

UN proper shipping name:

Transport hazard class(es): n.a.

Packing group: n.a.

Marine Pollutant: n.a.

Environmental hazards: Not applicable

Transport by air (IATA)

UN proper shipping name:

Transport hazard class(es): n.a.

Packing group: n.a.

Environmental hazards: Not applicable

Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Non-dangerous material according to Transport Regulations.

SECTION 15: Regulatory information

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

For classification and labelling see Section 2.

Observe restrictions: Yes

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

VOC (1999/13/EC): 0%

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

These details refer to the product as it is delivered.

Revised sections: n.a.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used |
|--|--|
| Eye Irrit. 2, H319 | Classification according to calculation procedure. |

The following phrases represent the posted R phrases / H phrases, Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

22 Harmful if swallowed.
 36 Irritating to eyes.
 36/37/38 Irritating to eyes, respiratory system and skin.
 41 Risk of serious damage to eyes.
 8 Contact with combustible material may cause fire.
 H272 May intensify fire, oxidiser.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.

Eye Irrit. — Eye irritation
 Ox. Sol. — Oxidising solid
 Acute Tox. — Acute toxicity - oral
 Eye Dam. — Serious eye damage
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation
 Skin Irrit. — Skin irritation

Any abbreviations and acronyms used in this document:

AC Article Categories
 acc., acc. to according, according to
 ACGIH American Conference of Governmental Industrial Hygienists
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOEL Acceptable Operator Exposure Level
 AOX Adsorbable organic halogen compounds
 approx. approximately
 Art., Art. no. Article number
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
 BCF Bioconcentration factor
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
 BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
 BMGV Biological monitoring guidance value (EH40, UK)
 BOD Biochemical oxygen demand
 BSEF Bromine Science and Environmental Forum
 bw body weight
 CAS Chemical Abstracts Service
 CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
 CIPAC Collaborative International Pesticides Analytical Council
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductive toxic
 COD Chemical oxygen demand
 CTFA Cosmetic, Toiletry, and Fragrance Association
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 DOC Dissolved organic carbon
 DT50 Dwell Time - 50% reduction of start concentration
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EC European Community
 ECHA European Chemicals Agency
 EEA European Economic Area
 EEC European Economic Community
 EINECS European Inventory of Existing Commercial Chemical Substances



ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ERC Environmental Release Categories

ES Exposure scenario

etc. et cetera

EU European Union

EWC European Waste Catalogue

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

HET-CAM Hen's Egg Test - Chorionallantoic Membrane

HGWP Halocarbon Global Warming Potential

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC Intermediate Bulk Container

IBC (Code) International Bulk Chemical (Code)

IC Inhibitory concentration

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

LC lethal concentration

LC50 lethal concentration 50 percent kill

LCLo lowest published lethal concentration

LD Lethal Dose of a chemical

LD50 Lethal Dose, 50% kill

LDLo Lethal Dose Low

LOAEL Lowest Observed Adverse Effect Level

LOEC Lowest Observed Effect Concentration

LOEL Lowest Observed Effect Level

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicable

n.av. not available

n.c. not checked

n.d.a. no data available

NIOSH National Institute of Occupational Safety and Health (United States of America)

NOAEC No Observed Adverse Effective Concentration

NOAEL No Observed Adverse Effect Level

NOEC No Observed Effect Concentration

NOEL No Observed Effect Level

ODP Ozone Depletion Potential

OECD Organisation for Economic Co-operation and Development

org. organic

PAH polycyclic aromatic hydrocarbon

PBT persistent, bioaccumulative and toxic

PC Chemical product category

PE Polyethylene

PNEC Predicted No Effect Concentration

POCP Photochemical ozone creation potential

ppm parts per million

PROC Process category

PTFE Polytetrafluorethylene

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.

RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SADT Self-Accelerating Decomposition Temperature

SAR Structure Activity Relationship

SU Sector of use

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SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.

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