# Descaling cartridges CL S20

Safety Data Sheet

This safety data sheet is for informational purposes only and does not fully comply with national legal requirements. The national distributor is responsible for a legally compliant safety data sheet.

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

### 1.1. Product identifier

| | | |
|---|---|---|
| Product form | : | Mixture |
| Trade name | : | Descaling cartridges CL S20 |
| Product code | : | 00312430 |
| Type of product | : | Detergent |

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

#### 1.2.1. Relevant identified uses

Intended for general public

| | | |
|---|---|---|
| Main use category | : | Consumer use |
| Use of the substance/mixture | : | Cleaning agent<br>Descaler |

#### 1.2.2. Uses advised against

No additional information available

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

**Manufacturer/Supplier**
i-clean Technologies GmbH
Mallaustr. 69
DE 68219 Mannheim
Germany
T +49 (0) 621 92109040, F +49 (0) 621 92109041
info@i-clean-technologies.com, www.i-clean-technologies.com

**Email competent person**
sds@kft.de

### 1.4. Emergency telephone number

| | | |
|---|---|---|
| Emergency number | : | 0049 621 845799731 |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

| | |
|---|---|
| Serious eye damage/eye irritation, Category 2 | H319 |
| Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation | H335 |

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes serious eye irritation. May cause respiratory irritation.

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS07

| | | |
|---|---|---|
| Signal word (CLP) | : | Warning |
| Contains | : | citric acid |
| Hazard statements (CLP) | : | H319 - Causes serious eye irritation.<br>H335 - May cause respiratory irritation. |

| | | |
|---|---|---|
| Precautionary statements (CLP) | : | P101 - If medical advice is needed, have product container or label at hand.<br>P102 - Keep out of reach of children.<br>P264 - Wash hands thoroughly after handling.<br>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P337+P313 - If eye irritation persists: Get medical advice/attention.<br>P501 - Dispose of contents and container to an approved waste disposal plant. |
| Child-resistant fastening | : | Not applicable |
| Tactile warning | : | Not applicable |

### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

| Component | |
|---|---|
| Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII | Alcohols, C16-18, ethoxylated (68439-49-6), citric acid (77-92-9) |
| Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | Alcohols, C16-18, ethoxylated (68439-49-6), citric acid (77-92-9) |

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

| Component | |
|---|---|
| Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 | citric acid (77-92-9), Alcohols, C16-18, ethoxylated (68439-49-6) |

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| citric acid | CAS-No.: 77-92-9<br>EC-No.: 201-069-1<br>EC Index-No.: 607-750-00-3 | ≥ 90 | Eye Irrit. 2, H319<br>STOT SE 3, H335 |
| Alcohols, C16-18, ethoxylated | CAS-No.: 68439-49-6<br>EC-No.: 500-212-8 | ≥ 2.5 – < 5 | Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)<br>Aquatic Acute 1, H400<br>Aquatic Chronic 3, H412 |

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Remove dirty clothes. Wash skin with plenty of water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after eye contact : Eye irritation.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Carbon dioxide. Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Strong water jet.

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

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon monoxide. Carbon dioxide.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information : Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

## SECTION 6: Accidental release measures

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

General measures : Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust.

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear personal protective equipment.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid sub-soil penetration. Prevent entry to sewers and public waters.

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

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Minimise generation of dust.

Other information : Disposal must be done according to official regulations.

### 6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

| | | |
|---|---|---|
| Additional hazards when processed | : | Not expected to present a significant hazard under anticipated conditions of normal use. |
| Precautions for safe handling | : | Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust. |
| Hygiene measures | : | Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

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

| | | |
|---|---|---|
| Storage conditions | : | Store in dry, cool, well-ventilated area. Keep container tightly closed. Store locked up. |
| Incompatible materials | : | oxidizing materials. acids and bases. |
| Information about storage in one common storage facility | : | Keep away from food, drink and animal feeding stuffs. |

### 7.3. Specific end use(s)

Descaler.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

**Appropriate engineering controls:**
Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

#### 8.2.2.1. Eye and face protection

No additional information available

#### 8.2.2.2. Skin protection

**Skin and body protection:**
Wear suitable protective clothing. EN ISO 13688

**Hand protection:**

In case of repeated or prolonged contact wear gloves. For undissolved solid substances following materials may be suitable: Nitrile rubber, Natural rubber, Butyl rubber, Chloroprene rubber. ISO 374-1. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

#### 8.2.2.3. Respiratory protection

**Respiratory protection:**

In case of insufficient ventilation, wear suitable respiratory equipment. Dust formation: dust mask. P2. EN 143. Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

#### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Always wash hands after handling the product. The above mentioned instructions regarding the protective equipment refer to the industrial use of larger quantities.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | Solid |
| Colour | : | white. |
| Appearance | : | cartridge (Contains Powders). |
| Odour | : | product specific. |
| Odour threshold | : | Not available |
| Melting point | : | Not available |
| Freezing point | : | Not applicable |
| Boiling point | : | Not available |
| Flammability | : | Could burn but do not ignite readily |
| Explosive properties | : | Product is not explosive. Dust may form explosive mixture in air. |
| Oxidising properties | : | Non oxidizing. |
| Lower explosion limit | : | Not applicable |
| Upper explosion limit | : | Not applicable |
| Flash point | : | Not applicable |
| Auto-ignition temperature | : | Not applicable |
| Decomposition temperature | : | Not available |
| pH | : | 2.2 (20 °C) |
| pH solution concentration | : | 10 g/l |
| Viscosity, kinematic | : | Not applicable |
| Viscosity, dynamic | : | Not applicable |
| Solubility | : | Water: Miscible (20 °C) |
| Partition coefficient n-octanol/water (Log Kow) | : | Not available |
| Vapour pressure | : | Not applicable |
| Vapour pressure at 50°C | : | Not available |
| Density | : | 0.98 g/cm³ (20 °C) |
| Relative density | : | Not available |
| Relative vapour density at 20°C | : | Not applicable |
| Particle size | : | Not available |

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) : Not applicable
VOC content : 0 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

### 10.5. Incompatible materials

Oxidizing agent. acids and bases.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

| Descaling cartridges CL S20 | |
|---|---|
| ATE CLP (oral) | > 2000 mg/kg bodyweight |
| ATE CLP (dermal) | > 2000 mg/kg bodyweight |
| ATE CLP (dust,mist) | > 5 mg/l |

| Alcohols, C16-18, ethoxylated (68439-49-6) | |
|---|---|
| LD50 oral rat | 500 mg/kg bodyweight |

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 2.2 (20 °C)
Serious eye damage/irritation : Causes serious eye irritation.
pH: 2.2 (20 °C)
Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : May cause respiratory irritation.

| citric acid (77-92-9) | |
|---|---|
| STOT-single exposure | May cause respiratory irritation. |

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified (Not relevant)

| Descaling cartridges CL S20 | |
|---|---|
| Viscosity, kinematic | Not applicable |

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met)

### 12.2. Persistence and degradability

| Descaling cartridges CL S20 | |
|---|---|
| Persistence and degradability | The surfactant(s) contained in this preparation 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. |

| Alcohols, C16-18, ethoxylated (68439-49-6) | |
|---|---|
| Persistence and degradability | Readily biodegradable. |

| citric acid (77-92-9) | |
|---|---|
| Persistence and degradability | Readily biodegradable. |
| Biodegradation | 100 % (19 d; (OECD 301E method)) |

### 12.3. Bioaccumulative potential

| Descaling cartridges CL S20 | |
|---|---|
| Bioaccumulative potential | The product has not been tested. |

| citric acid (77-92-9) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | -1.8 – -1.55 |
| Bioaccumulative potential | Bioaccumulation unlikely. |

### 12.4. Mobility in soil

| Descaling cartridges CL S20 | |
|---|---|
| Ecology - soil | The product has not been tested. |

### 12.5. Results of PBT and vPvB assessment

| Component | |
|---|---|
| Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII | Alcohols, C16-18, ethoxylated (68439-49-6), citric acid (77-92-9) |
| Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | Alcohols, C16-18, ethoxylated (68439-49-6), citric acid (77-92-9) |

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Disposal must be done according to official regulations. European waste catalogue. Do not discharge into drains or the environment. Do not dispose of with domestic waste.

Product/Packaging disposal recommendations : Recycle or dispose of in compliance with current legislation.

European List of Waste (LoW, EC 2000/532) : 20 01 29* - detergents containing dangerous substances

HP Code : HP5 - “Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:” waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.
HP4 - “Irritant – skin irritation and eye damage:” waste which on application can cause skin irritation or damage to the eye.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

| ADR | IMDG | IATA | ADN | RID |
|---|---|---|---|---|
| **14.1. UN number or ID number** | | | | |
| Not regulated for transport | | | | |
| **14.2. UN proper shipping name** | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| **14.3. Transport hazard class(es)** | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| **14.4. Packing group** | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| **14.5. Environmental hazards** | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| No supplementary information available | | | | |

### 14.6. Special precautions for user

**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

**Rail transport**

Not regulated

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Other information, restriction and prohibition regulations : Regulation (EC) No. 648/2004 of 31 March 2004 on detergents. Take note of Directive 94/33/EC on the protection of young people at work.

**REACH Annex XVII (Restriction List)**

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

**REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : 0 %

**Detergent Regulation (648/2004)**

**Labelling of contents**

| Component | % |
|---|---|
| non-ionic surfactants | <5% |

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

| Indication of changes | | | |
|---|---|---|---|
| **Section** | **Changed item** | **Change** | **Comments** |
| | General revision | | |

| Abbreviations and acronyms: | |
|---|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC50 | Median effective concentration |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| TLM | Median Tolerance Limit |
| vPvB | Very Persistent and Very Bioaccumulative |
| CAS-No. | Chemical Abstract Service number |

Data sources : Information provided by the manufacturer. European Chemicals Agency, http://echa.europa.eu/. MSDSs of the suppliers.

Department issuing data specification sheet: : KFT Chemieservice GmbH
Im Leuschnerpark 3
D-64347 Griesheim

Phone: +49 6155-8981-400
Fax: +49 6155 8981-500
SDS Service: +49 6155 8981-522

Contact person : Daphné Houiller


| Full text of H- and EUH-statements: | |
|---|---|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment – Acute Hazard, Category 1 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment – Chronic Hazard, Category 3 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| H302 | Harmful if swallowed. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H400 | Very toxic to aquatic life. |
| H412 | Harmful to aquatic life with long lasting effects. |
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation |

| Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: | | |
|---|---|---|
| Eye Irrit. 2 | H319 | Calculation method |
| STOT SE 3 | H335 | Calculation method |




This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.