Material safety datasheets

Cleaner tablets for SelfCooking Center®
Care-Tabs for SelfCooking Center®
1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

Detergent-Tab for RATIONAL SelfCooking Center®

Product - No. 56.00.206, 56.00.210

Use of the substance/preparation

Cleaning agent

Company/undertaking identification

Company name : Rational AG

Street : Aoglunger Strasse 62
Place : D-86899 Landsberg
Inquiry office : Produktmanagement
Tel.: ++49 (0)8191-3270
Fax: ++49 (0)8191-21735
Emergency telephone: ++49 (0)89-19240
Responsible for the safety data sheet: reinigung@rational-online.de

2. Hazards identification

Classification

Indications of danger : Corrosive
R-phrases :
Causes severe burns.
Irritating to respiratory system.

3. Composition/information on ingredients

Chemical characterization ( preparation )

Hazardous components

<table>
<thead>
<tr>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>Chemical name</th>
<th>Quantity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>215-185-5</td>
<td>1310-73-2</td>
<td>Sodium hydroxide</td>
<td>&lt; 45 %</td>
<td>C R35</td>
</tr>
<tr>
<td>229-912-9</td>
<td>6834-92-0</td>
<td>Disodium metasilicate</td>
<td>&lt; 25 %</td>
<td>C, Xi R34-37</td>
</tr>
<tr>
<td>207-838-8</td>
<td>497-19-8</td>
<td>Sodium carbonate</td>
<td>&lt; 15 %</td>
<td>Xi R36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fatty alcohol alcoxylate</td>
<td>&lt; 5 %</td>
<td>Xi R38</td>
</tr>
</tbody>
</table>

Full text of each relevant R phrase can be found in heading 16.

4. First aid measures

General information

Remove contaminated soaked clothing immediately.
If you feel unwell, seek medical advice.

After inhalation

Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.

After contact with skin

In case of contact with skin wash off immediately with plenty of water.
Consult a doctor if skin irritation persists.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Consult (eye) doctor immediately.
5. Fire-fighting measures

**Suitable extinguishing media**
Product does not burn, fire-extinguishing activities according to surrounding.

**Extinguishing media which must not be used for safety reasons**
Full water jet

**Special exposure hazards arising from substance or preparation itself, combustion products, resulting gases**
Fire may produce:
- Irritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).

**Special protective equipment for fire-fighters**
- Wear self-contained breathing apparatus and protective suit.

**Additional information**
- Cool containers at risk with water spray jet.
- Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6. Accidental release measures

**Personal precautions**
- Avoid contact with skin, eyes and clothing.
- Ensure adequate ventilation.
- Avoid dust formation.
- Use personal protective clothing.

**Environmental precautions**
- Do not discharge into the drains/surface waters/groundwater.

**Methods for cleaning up/taking up**
- Pick up mechanically, avoiding dust, and provide disposal in suitable recipients.
- Flush away residues with water.

7. Handling and storage

**Handling**

**Advice on safe handling**
- Avoid the formation of dust.
- Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.
- Do not breathe dust.
- Avoid contact with eyes, skin or mucous membrane.

**Advice on protection against fire and explosion**
- No special protective measures against fire required.

**Storage**

**Requirements for storage rooms and vessels**
- Keep containers tightly closed in a dry, well-ventilated place.
- Do not use zinc containers.
- Do not use aluminium containers.
- Do not use light metal drums.

**Advice on storage compatibility**
- Do not store with acids.
8. Exposure controls/personal protection

Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical name</th>
<th>ml/m³</th>
<th>mg/m³</th>
<th>F/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310-73-2</td>
<td>Sodium hydroxide</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

Exposure controls

Occupational exposure controls

Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

Protective and hygiene measures

Avoid the formation of dust. Do not inhale dust.
Avoid contact with eyes and skin.
Wash hands before breaks and immediately after handling the product.
When using, do not eat, drink or smoke.
Remove and wash contaminated clothing before re-use.

Respiratory protection

No personal respiratory protective equipment normally required.
Breathing apparatus (particle filter) only if dust is formed.

Hand protection

Protective gloves resistant to chemicals made off natural-rubber latex, Minimum coat thickness 0.6 mm, Permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Lapren 706> made by www.kcl.de.
This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.
Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Eye protection

Eye wash bottle with pure water.
Tightly fitting goggles

Skin protection

Light protective clothing

9. Physical and chemical properties

General information

Physical state : Tablet
Colour : White
Odour : Characteristic

Important health, safety and environmental information

pH-Value : n. d.

Changes in the physical state

Flash point : n.a.
Lower explosion limits : n.a.
Upper explosion limits : n.a.
Density (at 20 °C) : 1.1 g/cm³
Water solubility : Soluble (at 20 °C)
Other information

Ignition temperature : n.a.

10. Stability and reactivity

Conditions to avoid
Strong exothermic reaction with acids.
Reactions with light metals, with evolution of hydrogen.

Materials to avoid
Acids

Hazardous decomposition products
Irritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).
Hydrogen

Additional information
No decomposition if stored and applied as directed.

11. Toxicological information

Empirical data on effects on humans
Causes severe burns.
Irritates respiratory tract.
Danger of perforation of the gullet and of the stomach.

12. Ecological information

Further information
When low concentrations are discharged correctly into adapted biological sewage treatment plants, interference with the degradation activity of activated sludge is not likely.
The product is an alkaline solution. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.
Slightly water hazardous.
Do not discharge product unmonitored into the environment.

13. Disposal considerations

Advice on disposal
Remove in accordance with local official regulations.

Waste disposal number of waste from residues/unused products
070699 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; wastes not otherwise specified

Contaminated packaging
Empty containers should be taken for local recycling, recovery or waste disposal.
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed of like the product.

14. Transport information

Land transport (ADR/RID)
UN number : 3262
ADR/RID class : 8
Classification code : C6

Warning plate
Hazard-no. : 80
Hazard label : 8
ADR/RID packing group : II
Limited quantity : LQ 23

Description of the goods
Corrosive solid, basic, inorganic, n.o.s. (Disodium metasilicate, Sodium hydroxide)
Detergent-Tab for RATIONAL SelfCooking Center®

Safety Data Sheet

according to Regulation (EU) No. 1907/2006

Other applicable information (land transport)
LQ 23: combination packaging: 3 kg / 30 kg (total gross mass); trays: 1 kg / 20 kg (total gross mass).

Marine transport

- UN number: 3262
- IMDG code: 8
- Marine pollutant: No
- Hazard label: 8
- IMDG packing group: II
- EmS: F-A; S-B
- Limited quantity: 1 kg / 30 kg

Description of the goods
CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (sodium hydroxide, disodium metasilicate)

Other applicable information (marine transport)
Limited quantities (chapter 3.4): combination packaging: 1 kg / 30 kg (total gross mass); trays: 1 kg / 20 kg (total gross mass).

Air transport

- UN/ID number: 3262
- ICAO/IATA-DGR: 8
- Hazard label: 8
- ICAO packing group: II
- Limited quantity Passenger: Y814 / 5 kg
- IATA-packing instructions - Passenger: 814
- IATA-max. quantity - Passenger: 15 kg
- IATA-packing instructions - Cargo: 816
- IATA-max. quantity - Cargo: 50 kg

Description of the goods
CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (sodium hydroxide, disodium metasilicate, mixture)

15. Regulatory information

Labelling

Additional advice on labelling
According to EC-regulations the product is to be labelled as follows:

Danger symbols:

- C - Corrosive

Hazardous component(s) to be indicated on label
- Disodium metasilicate
- Sodium hydroxide

R phrases

- 35 Causes severe burns.
- 37 Irritating to respiratory system.

S phrases

- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 35 This material and its container must be disposed of in a safe way.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

EU regulatory information

1999/13/EC (VOC): 0 %
16. Other information

Full text of R-phrases referred to under sections 2 and 3

34 Causes burns.
35 Causes severe burns.
36 Irritating to eyes.
37 Irritating to respiratory system.
38 Irritating to skin.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

"(n.a. = not applicable; n.d. = not determined)"

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)
### 1. Identification of the substance/preparation and of the company/undertaking

**Identification of the substance or preparation**

RATIONAL CARE-TAB

**Product - No.**
56.00.560, 56.00.562

**Use of the substance/preparation**

Preservative agent

**Company/undertaking identification**

- **Company name:** Rational AG
- **Street:** Iglinger Strasse 62
- **Place:** D-86899 Landsberg
- **Inquiry office:** Produktmanagement
  - Tel.: ++49 (0)8191-3270
  - Fax: ++49 (0)8191-21735
  - Emergency telephone: ++49 (0)89-19240
  - Responsible for the safety data sheet: reinigung@rational-online.de

### 2. Hazards identification

**Classification**

- **Indications of danger:** Irritant
- **R-phrases:**
  - Irritating to eyes and skin.

### 3. Composition/information on ingredients

**Chemical characterization (preparation)**

Mixture containing following substances with additives:

<table>
<thead>
<tr>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>Chemical name</th>
<th>Quantity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>201-069-1</td>
<td>77-92-9</td>
<td>Citric acid</td>
<td>&gt; 40 %</td>
<td>Xi R36</td>
</tr>
<tr>
<td>210-514-9</td>
<td>617-48-1</td>
<td>Malic acid</td>
<td>&gt; 20 %</td>
<td>Xi R36/38</td>
</tr>
<tr>
<td>204-673-3</td>
<td>124-04-9</td>
<td>Adipic acid</td>
<td>1 - 5 %</td>
<td>Xi R36</td>
</tr>
</tbody>
</table>

Full text of each relevant R phrase can be found in heading 16.

### 4. First aid measures

**General information**

If you feel unwell, seek medical advice.

**After inhalation**

Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.

**After contact with skin**

In case of contact with skin wash off immediately with plenty of water.

**After contact with eyes**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical treatment by eye specialist.

**After ingestion**

...
RATIONAL CARE-TAB

5. Fire-fighting measures

Suitable extinguishing media
Water spray jet
Fire-extinguishing activities according to surrounding.

Extinguishing media which must not be used for safety reasons
None

Special exposure hazards arising from substance or preparation itself, combustion products, resulting gases
None

Special protective equipment for fire-fighters
Not required.

Additional information
Do not release chemically contaminated water into drains, soil or surface waters. Sufficient measures must be taken to retain water used for extinguishing.

6. Accidental release measures

Personal precautions
No special precautions required.

Environmental precautions
Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning up/taking up
Pick up mechanically, avoiding dust, and provide disposal in suitable recipients.
Flush away residues with water.

7. Handling and storage

Handling

Advice on safe handling
Avoid the formation of dust.
Avoid contact with eyes, skin or mucous membrane.

Advice on protection against fire and explosion
No special protective measures against fire required.

Storage

Requirements for storage rooms and vessels
Keep in the original sealed container.

Further information on storage conditions
Keep away from food, drink and animal feeding stuffs.

8. Exposure controls/personal protection

Exposure limit values

Additional advice on control parameters
Obey TLV for common dust, if applicable.

Exposure controls

Protective and hygiene measures
Avoid contact with eyes and skin.  
Wash hands before breaks and at the end of workday.  
When using, do not eat, drink or smoke.  
Remove and wash contaminated clothing before re-use.

Respiratory protection
No personal respiratory protective equipment normally required.

Hand protection
Not required.

Eye protection
Safety goggles with side protection

9. Physical and chemical properties

General information
- Physical state: Tablet
- Colour: White
- Odour: Characteristic

Important health, safety and environmental information
- Test method
  - pH-Value: 2.5 (1%)

Changes in the physical state
- Flash point: n.a.
- Lower explosion limits: n.a.
- Upper explosion limits: n.a.

Oxidizing properties
- Vapour pressure: n.a.
- Water solubility: Soluble
- Partition coefficient: n. d.

Other information
- Ignition temperature: n.a.
- Bulk density: approx. 800 g/L

10. Stability and reactivity

Conditions to avoid
Not known

Materials to avoid
Not known

Hazardous decomposition products
Not known

11. Toxicological information

Acute toxicity
- LD₅₀/oral/rat: Citric acid: 3000 mg/kg
- LD₅₀/oral/rat: Adipic acid: 5700 mg/kg

Corrosive and irritant effects
- Irritating to eyes and skin.

Empirical data on effects on humans
- If appropriately handled and in accordance with the general hygienic rules, no damages to health have become known.
12. Ecological information

**Ecotoxicity**

- **Citric acid:**
  - LC50 (96h)/Leuciscus idus: 440 mg/l
  - EC50 (72h)/Daphnia magna: 85 mg/l
  - Toxicity to bacteria: > 10000 mg/l

- **Adipic acid:**
  - LC50 (96h)/Pimephales promelas: 97 mg/l
  - EC50 (48h)/Daphnia magna: 85,6 mg/l
  - EC50 (96h)/Scenedesmus subspicatus: 31,3 mg/l

**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.

**Bioaccumulative potential**

No data available.

Further information

Do not release undiluted or in higher quantities into the groundwater, sewerage or waters.

Do not release undiluted into wastewater or drainage ditch.

Slightly water hazardous.

13. Disposal considerations

**Advice on disposal**

Remove in accordance with local official regulations.

**Waste disposal number of waste from residues/unused products**

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing dangerous substances Classified as hazardous waste.

**Contaminated packaging**

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

14. Transport information

**Further Information**

No hazardous material as defined by the transport regulations.

15. Regulatory information

**Labelling**

**Additional advice on labelling**

According to EC-regulations the product is to be labelled as follows:

**Danger symbols:**

- **Xi - Irritant**
Rational AG

RATIONAL CARE-TAB

Safety Data Sheet

according to Regulation (EU) No. 1907/2006

Revision date: 14.08.2008

00625-0016

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R phrases

36/38 Irritating to eyes and skin.

S phrases

02 Keep out of the reach of children.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

28 After contact with skin, wash immediately with plenty of water.

46 If swallowed, seek medical advice immediately and show this container or label.

24/25 Avoid contact with skin and eyes.

EU regulatory information

1999/13/EC (VOC): 0 %

Additional information

This product complies with the criteria developed in the Regulation (EC) No. 648/2004 on detergents.

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

16. Other information

Full text of R-phrases referred to under sections 2 and 3

36 Irritating to eyes.

36/38 Irritating to eyes and skin.

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