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

1.1 Product identifier
MD 555 cleaner Special detergent for suction systems

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

Relevant identified uses
MD 555 is a non-foaming special cleaner for dental suction systems including drainage lines.

Product Categories [PC]
PC35 - Washing and cleaning products (including solvent based products)

Uses advised against
None, if handled according to order.

Remark
The product is intended for professional use.

1.3 Details of the supplier of the safety data sheet
Supplier (manufacturer/importer/only representative/downstream user/distributor)
orochemie GmbH + Co. KG
Street: Max-Planck-Straße 27
Postal code/city: 70806 Kornwestheim
Telephone: +49 7154 1308-0
Telefax: +49 7154 1308-40

Information contact: DüRR DENTAL SE, Höpfigheimer Str. 17, 74321 Bietigheim-Bissingen, Germany
Tel: +49 7142 705-0, Fax: +49 7142 705-500, info@duerrdental.com
in Great Britain/Ireland:
DüRR DENTAL [Products] UK Ltd., 14 Linnell Way - Telford Way Industrial Estate, Kettering Northants NN16 8PS, United Kingdom
Tel: +44 1536 526740, Fax.: +44 1536 526749, info@duerruk.com

1.4 Emergency telephone number
INT: +49 6132 84463 (24 h/7 d)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]
Eye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.
Skin Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.

Classification procedure
The classification was carried out according to the calculation method of Regulation No. (EC) 1272/2008 [CLP].

2.2 Label elements

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

Exclamation mark (GHS07)
Signal word
Warning
Safety Data Sheet  
according to Regulation (EC) No. 1907/2006 (REACH)  

**Trade name:** MD 555 cleaner Special detergent for suction systems  
**Revision:** 02.01.2018  
**Print date:** 02.01.2018  
**Version (Revision):** 2.0.1 (2.0.0)

### Hazard statements

- **H315** Causes skin irritation.
- **H319** Causes serious eye irritation.

### Precautionary statements

- **P280** Wear protective gloves and eye/face protection.
- **P333+P313** If skin irritation or rash occurs: Get medical advice/attention.
- **P305+P351+P338** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **P403+P233** Store in a well-ventilated place. Keep container tightly closed.
- **P501** Dispose of contents/container to hazardous or special waste collection point.

### 2.3 Other hazards

None

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

**Description**

MD 555 contains organic and inorganic acids, foam-free surfactants, dyes and auxiliary agents in aqueous solution.

**Hazardous ingredients**

- **CITRIC ACID MONOHYDRATE ; REACH registration No. : 01-2119457026-42 ; EC No. : 201-069-1; CAS No. : 5949-29-1**
  - Weight fraction : ≥ 20 - < 25 %
  - Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319
- **PHOSPHORIC ACID ; REACH registration No. : 01-2119485924-24 ; EC No. : 231-633-2; CAS No. : 7664-38-2**
  - Weight fraction : ≥ 15 - < 20 %

**Additional information**

Full text of H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**General information**

Remove contaminated, saturated clothing immediately. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**Following inhalation**

Provide fresh air. In case of respiratory tract irritation, consult a physician.

**In case of skin contact**

Wash with plenty of water. When in doubt or if symptoms are observed, get medical advice.

**After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**After ingestion**

If swallowed, immediately drink: Water Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Call a physician immediately.

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

Causes serious eye irritation. Causes skin irritation.

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

None

### SECTION 5: Firefighting measures
5.1 Extinguishing media

Suitable extinguishing media
- Carbon dioxide (CO2) Extinguishing powder
- Water spray
- Water mist
The product itself does not burn. Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media
- High power water jet

5.2 Special hazards arising from the substance or mixture
None known.

5.3 Advice for firefighters
- Adapt protective equipment to surrounding fire.
- Personal protection equipment
- Adapt protective equipment to surrounding fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protection equipment. See protective measures under point 7 and 8.

For non-emergency personnel
Use personal protection equipment. See protective measures under point 7 and 8.

For emergency responders
Personal protection equipment
See protective measures under point 7 and 8.

6.2 Environmental precautions
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up
- For cleaning up
  Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

Other information
Treat the recovered material as prescribed in the section on waste disposal.

6.4 Reference to other sections
None

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Keep/Store only in original container. Please note safety instructions and directions for use on the drum. Handle and open container with care. Provide adequate ventilation. Do not breathe vapour/aerosol.

Protective measures
Measures to prevent fire
Usual measures for fire prevention. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep/Store only in original container. Keep container tightly closed. Keep in a cool, well-ventilated place. Do not store in temperatures below 5 °C.

Hints on joint storage
Store the foodstuffs separately.
7.3 Specific end use(s)

None

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

PHOSPHORIC ACID ; CAS No. : 7664-38-2

<table>
<thead>
<tr>
<th>Limit value type (country of origin)</th>
<th>Limit value</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL ( EC )</td>
<td>2 mg/m³</td>
<td>08.06.2000</td>
</tr>
<tr>
<td>TWA ( EC )</td>
<td>1 mg/m³</td>
<td>08.06.2000</td>
</tr>
<tr>
<td>TLV/STEL ( EC )</td>
<td>2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TLV/TWA ( EC )</td>
<td>1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

DNEL/DMEL and PNEC values

There are no data available on the preparation itself.

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Eye glasses with side protection DIN EN 166

Skin protection

Hand protection

Short-term exposure (Level 2: < 30 min): disposable gloves to EN374 category III, e.g. nitrile rubber, material thickness 0.1 mm.

Long-term exposure (Level 6: < 480 min): protective gloves to EN374 category III, e.g. nitrile rubber, material thickness 0.7 mm.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.

Body protection

Body protection: not required.

Respiratory protection

Usually no personal respirative protection necessary.

General health and safety measures

Keep away from food, drink and animal feedingstuffs. Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing. Wash hands before breaks and after work. Separate storage of work clothes. When using do not eat, drink, smoke, sniff.

Occupational exposure controls

Technical measures to prevent exposure

Provide adequate ventilation.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance:** liquid

**Colour:** light red

**Odour:** odourless

**Safety relevant basis data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/melting range</td>
<td>(1013 hPa) No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>(1013 hPa) approx. 100 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>(1013 hPa) not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>not applicable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>(50 °C) No data available</td>
</tr>
<tr>
<td>Density</td>
<td>(20 °C) 1.15 - 1.25 g/cm³</td>
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<tr>
<td>Solvent separation test</td>
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<tr>
<td>Water solubility</td>
<td>(20 °C) 100 Wt %</td>
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<td>pH value</td>
<td>(20 °C / 50 g/l) 1.5 - 2.5</td>
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<tr>
<td>pH value</td>
<td>(20 °C / 100 g/l) &lt; 1</td>
</tr>
<tr>
<td>Log P O/W</td>
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</tr>
<tr>
<td>Flow time</td>
<td>(20 °C) &lt; 12 s DIN-cup 4 mm</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not applicable</td>
</tr>
<tr>
<td>Maximum VOC content (EC)</td>
<td>0 Wt %</td>
</tr>
<tr>
<td>Oxidising liquids</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Corrosive to metals</td>
<td>Not corrosive to metals</td>
</tr>
</tbody>
</table>

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

None, if handled according to order.

10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7). Exothermal reaction with alkalis.

10.3 Possibility of hazardous reactions

Exothermal reaction with alkalis.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

Alkali (lye), concentrated.

10.6 Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself.

**Acute effects**
Acute oral toxicity
Parameter: ATEmix calculated
Exposure route: Oral
Effective dose: not relevant
Parameter: LD50 (PHOSPHORIC ACID; CAS No.: 7664-38-2)
Exposure route: Oral
Species: Rat
Effective dose: 1530 mg/kg
Parameter: LD50 (CITRIC ACID; CAS No.: 77-92-9)
Exposure route: Oral
Species: Rat
Effective dose: 9999,99 mg/kg

Practical experience/human evidence
Eye contact: irritation. Causes skin irritation.

Acute dermal toxicity
Parameter: ATEmix calculated
Exposure route: Dermal
Effective dose: not relevant
Parameter: LD50 (PHOSPHORIC ACID; CAS No.: 7664-38-2)
Exposure route: Dermal
Species: Rabbit
Effective dose: 2740 mg/kg

Acute inhalation toxicity
Parameter: ATEmix calculated
Exposure route: Inhalative (vapour)
Effective dose: not relevant
Parameter: LD50 (PHOSPHORIC ACID; CAS No.: 7664-38-2)
Exposure route: Inhalation
Species: Rabbit
Effective dose: 1,689 mg/l

Irritant and corrosive effects
Causes serious eye irritation. Causes skin irritation.

Sensitisation
None known.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
No information available.

Additional information
The classification was carried out according to the calculation method of Regulation No. (EC) 1272/2008 [CLP].

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity
There are no data available on the preparation itself.
Acute (short-term) fish toxicity
Parameter: LC50 (PHOSPHORIC ACID; CAS No.: 7664-38-2)
Species: Fish
Evaluation parameter: Acute (short-term) fish toxicity
Effective dose: 3 - 3,5 mg/l
Exposure time: 96 h
Parameter: LC0 (PHOSPHORIC ACID; CAS No.: 7664-38-2)
Species: Fish
Evaluation parameter: Acute (short-term) fish toxicity
Effective dose : 100 - 1000 mg/l

**Acute (short-term) daphnia toxicity**
- **Parameter** : EC50 (CITRIC ACID MONOHYDRATE; CAS No. : 5949-29-1)
- **Species** : Daphnia magna (Big water flea)
- **Evaluation parameter** : Acute (short-term) daphnia toxicity
- **Effective dose** : 120 mg/l
- **Exposure time** : 72 h

**Acute (short-term) algae toxicity**
- **Parameter** : EC50 (CITRIC ACID MONOHYDRATE; CAS No. : 5949-29-1)
- **Species** : Scenedesmus quadricauda
- **Evaluation parameter** : Acute (short-term) algae toxicity
- **Effective dose** : 640 mg/l
- **Exposure time** : 168 h

**Bacteria toxicity**
- **Parameter** : EC50 (CITRIC ACID MONOHYDRATE; CAS No. : 5949-29-1)
- **Species** : Pseudomonas putida
- **Evaluation parameter** : Bacteria toxicity
- **Effective dose** : > 10000 mg/l
- **Exposure time** : 16 h

12.2 **Persistence and degradability**
- **Abiotic degradation**
  No data available.
- **Biodegradation**
  All active agents are biodegradable at the dilution rates arising in the sewage system. The surfactant contained in this preparation complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

12.3 **Bioaccumulative potential**
No information available.

12.4 **Mobility in soil**
- **Known or predicted distribution to environmental compartments**
  There are no data available on the preparation itself.
- **Adsorption/Desorption**

12.5 **Results of PBT and vPvB assessment**
No information available.

12.6 **Other adverse effects**
No information available.

12.7 **Additional ecotoxicological information**
Prevent from flowing into surface water/ground water.

**SECTION 13: Disposal considerations**

13.1 **Waste treatment methods**
- **Product/Packaging disposal**
  - **Waste codes/waste designations according to EWC/AVV**
  - **Waste code product**
    Concentrate/larger quantities: 20 01 14* acids.
  - **Waste treatment options**
    **Appropriate disposal / Product**
    Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.
Appropriate disposal / Package
Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

14.1 UN number
No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name
No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es)
No dangerous good in sense of these transport regulations.

14.4 Packing group
No dangerous good in sense of these transport regulations.

14.5 Environmental hazards
No dangerous good in sense of these transport regulations.

14.6 Special precautions for user
None

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
Restrictions of occupation
According to directive 94/33/EC, juveniles are only allowed to handle this product as long as all effects of dangerous substances are prevented.

15.2 Chemical safety assessment
For this mixture a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Indication of changes
03. Hazardous ingredients

16.2 Abbreviations and acronyms
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimates
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CMR = Carcinogen, Mutagen or Reproductive toxicant
CO₂ = Carbon dioxide
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EC = European Commission
EC50 = Half maximal effective concentration
EN = European Standard (Norm)
EU = European Union
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
H statement = GHS Hazard statement
16.3 Key literature references and sources for data
None

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]
No information available.

16.5 Relevant H- and EUH-phrases (Number and full text)

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

16.6 Training advice
None

16.7 Additional information
Notice the directions for use on the label.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.