# 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 | **Version (Revision) :** | 2.0.1 (2.0.0) |
| **Print date :** | 02.01.2018 | | |

## 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

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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

**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 % |
| Classification 1272/2008 [CLP] : | Met. Corr. 1 ; H290 Skin Corr. 1B ; H314 Eye Dam. 1 ; H318 |

**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 fire-fighting measures to the fire surroundings.

#### Unsuitable extinguishing media

High power water jet

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

None known.

#### Hazardous combustion products

None known.

### 5.3 Advice for firefighters

Adapt protective equipment to surrounding fire.

#### Special protective equipment for firefighters

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

Limit value type (country of origin) : STEL ( EC )
Limit value : 2 mg/m³
Version : 08.06.2000

Limit value type (country of origin) : TWA ( EC )
Limit value : 1 mg/m³
Version : 08.06.2000

Limit value type (country of origin) : TLV/STEL ( EC )
Limit value : 2 mg/m³

Limit value type (country of origin) : TLV/TWA ( EC )
Limit value : 1 mg/m³

#### DNEL/DMEL and PNEC values

There are no data available on the preparation itself.

**DNEL/DMEL**

| | |
|---|---|
| Limit value type : | DNEL Consumer (local) ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 ) |
| Exposure route : | Inhalation |
| Exposure frequency : | Long-term (repeated) |
| Limit value : | 0,73 mg/m³ |
| Limit value type : | DNEL worker (local) ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 ) |
| Exposure route : | Inhalation |
| Exposure frequency : | Long-term (repeated) |
| Limit value : | 2,92 mg/m³ |

### 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**

| | | | | | |
|---|---|---|---|---|---|
| **Melting point/melting range :** | ( 1013 hPa ) | | No data available | | |
| **Initial boiling point and boiling range :** | ( 1013 hPa ) | approx. | 100 | °C | |
| **Decomposition temperature :** | ( 1013 hPa ) | | not applicable | | |
| **Flash point :** | | | not applicable | | |
| **Ignition temperature :** | | | not applicable | | |
| **Lower explosion limit :** | | | not applicable | | |
| **Upper explosion limit :** | | | not applicable | | |
| **Vapour pressure :** | ( 50 °C ) | | No data available | | |
| **Density :** | ( 20 °C ) | | 1,15 - 1,25 | g/cm$^3$ | |
| **Solvent separation test :** | ( 20 °C ) | < | 3 | % | |
| **Water solubility :** | ( 20 °C ) | | 100 | Wt % | |
| **pH value :** | ( 20 °C / 50 g/l ) | | 1,5 - 2,5 | | |
| **pH value :** | ( 20 °C / 100 g/l ) | < | 1 | | |
| **log P O/W :** | | | No data available | | |
| **Flow time :** | ( 20 °C ) | < | 12 | s | DIN-cup 4 mm |
| **Odour threshold :** | | | not applicable | | |
| **Maximum VOC content (EC) :** | | | 0 | Wt % | |
| **Oxidising liquids :** | Not applicable. | | | | |
| **Explosive properties :** | Not applicable. | | | | |
| **Corrosive to metals :** | Not corrosive to metals. | | | | |

### 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.

### 11.5 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
Parameter : EC0 ( CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1 )
Evaluation parameter : Bacteria toxicity
Effective dose : 10000 mg/l

### 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
$CO_2$ = 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

IATA = International Air Transport Association ICAO-TI = International Civil Aviation Organization-Technical Instructions
IMDG = International Maritime Dangerous Goods
LC50 = Median lethal concentration
LD50 = Median lethal dose
LogPow = Logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOEC/NOEL = No observed effect concentration/level
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RMM = Risk Management Measure
RRN = REACH Registration Number
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
SVHC = Substances of Very High Concern
TLV/STEL = Threshold limit value/short-term exposure limit
TLV/TWA = Threshold limit value/time weighted average
UN = United Nations
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

### 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.