

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

schülke 

thermodent® neutralizer

No Change Service!

Version
03.05

Revision Date:
25.01.2020

Date of last issue: 09.09.2019
Date of first issue: 12.10.2007

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

1.1 Product identifier

Trade name : thermodent® neutralizer

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

Use of the Sub-
stance/Mixture : Decalcification agent

Recommended restrictions
on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Manufacturer/ Supplier : Schülke & Mayr GmbH
Robert-Koch-Str. 2

22851 Norderstedt
Germany
Telephone: +49 (0)40/ 52100-0
Telefax: +49 (0)40/ 52100318
mail@schuelke.com
www.schuelke.com

Supplier : Schülke & Mayr UK Ltd.
Cygnet House
1, Jenkin Road, Meadowhall

Sheffield S9 1AT
United Kingdom
Telephone: +44 114 254 35 00
Telefax: +44 114 254 35 01
mail.uk@schulke.com

E-mail address of person
responsible for the
SDS/Contact person : Application Department
+49 (0)40/ 521 00 666
AD@schuelke.com
(Schülke & Mayr UK Ltd.: +44-1142543500)

1.4 Emergency telephone number

Emergency telephone num-
ber : UK Poisons Emergency number: 0870 600 6266

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1 H290: May be corrosive to metals.

Eye irritation, Category 2 H319: Causes serious eye irritation.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H290 May be corrosive to metals.
H319 Causes serious eye irritation.

Precautionary statements :

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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

No special risks known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Solution of the following substances with harmless additives.

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Citric acid monohydrate	5949-29-1 201-069-1 - - - 01-2119457026-42-XXXX	Eye Irrit. 2; H319	>= 50 - < 70

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Take off all contaminated clothing immediately.

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- If inhaled : If breathed in, move person into fresh air.
- In case of skin contact : Wash with water and soap as a precaution.
If symptoms persist, call a physician.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty
of water and seek medical advice.
If eye irritation persists, consult a specialist.
- If swallowed : Do NOT induce vomiting.
Drink water as a precaution.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : For specialist advice physicians should contact the Poisons
Information Service.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- Suitable extinguishing media : Dry powder
Foam
Water spray jet
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : No information available.
- Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide

5.3 Advice for firefighters

- Special protective equipment : In the event of fire, wear self-contained breathing apparatus.
for firefighters

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- Personal precautions : Use personal protective equipment.

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6.2 Environmental precautions

Environmental precautions : Avoid subsoil penetration.

6.3 Methods and material for containment and cleaning upMethods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).**6.4 Reference to other sections**

see Section 8 + 13

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling : Never mix concentrates directly.

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

Hygiene measures : Keep away from food and drink.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store at room temperature in the original container.

Further information on storage conditions : Keep away from heat. Keep container tightly closed. Recommended storage temperature: 5 - 25°C

Advice on common storage : No materials to be especially mentioned.

7.3 Specific end use(s)

Specific use(s) : none

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Contains no substances with occupational exposure limit values.

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Citric acid monohydrate	Fresh water	0.44 mg/l
	Marine water	0.044 mg/l
	Fresh water sediment	7.52 mg/kg
	Marine sediment	0.752 mg/kg
	Soil	29.2 mg/kg

8.2 Exposure controls**Personal protective equipment**

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Eye protection	:	Safety glasses with side-shields conforming to EN166
Hand protection	:	
Directive	:	The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.
Remarks	:	Splash protection: disposable nitrile rubber gloves e.g. Dermatril (layer thickness: 0.11 mm) made by KCL or gloves from other manufacturers offering the same protection. Prolonged contact: Nitrile rubber gloves e.g. Camatril (>480 Min., layer thickness: 0,40 mm) or butyl rubber gloves e.g. Butoject (>480 Min., layer thickness: 0,70 mm) made by KCL or gloves from other manufacturers offering the same protection.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Protective measures	:	Avoid contact with skin and eyes.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance	:	liquid
Colour	:	colourless
Odour	:	nearly odourless
Odour Threshold	:	not determined
pH	:	ca. 2 (20 °C)
Melting point/freezing point	:	ca. 0 °C
Decomposition temperature	:	Not applicable
Boiling point/boiling range	:	ca. 100 °C
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapour pressure	:	ca. 25 hPa (20 °C)

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Vapour density	:	No data available
Relative density	:	ca. 1.17 g/cm ³ (20 °C)
Solubility(ies)		
Water solubility	:	in all proportions (20 °C)
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	ca. 4 mPa*s Method: ISO 3219
Explosive properties	:	No data available
Oxidizing properties	:	Not applicable

9.2 Other information

Metal corrosion rate	:	> 6.25 mm/a Corrosive to metals Aluminium and Mild steel
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SECTION 10: Stability and reactivity**10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : None reasonably foreseeable.

10.4 Conditions to avoid

Conditions to avoid : Protect from frost, heat and sunlight.

10.5 Incompatible materials

Materials to avoid : Metals

10.6 Hazardous decomposition products

None reasonably foreseeable.

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SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity****Components:****Citric acid monohydrate:**

Acute oral toxicity	:	LD50 (Mouse): 5,400 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg
Acute toxicity (other routes of administration)	:	LD50 intravenous (Rat): 725 mg/kg

Skin corrosion/irritation**Components:****Citric acid monohydrate:**

Species	:	Rabbit
Result	:	Mild skin irritation
Remarks	:	Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation**Product:**

Assessment	:	Causes serious eye irritation.
Method	:	Calculation method

Components:**Citric acid monohydrate:**

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Eye irritation

Respiratory or skin sensitisation**Components:****Citric acid monohydrate:**

Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.

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Germ cell mutagenicity**Components:****Citric acid monohydrate:**

Genotoxicity in vitro	: Test Type: Ames test Test system: Salmonella typhimurium Concentration: 0 - 5 mg/ plate Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative
Genotoxicity in vivo	: Species: Rat Application Route: Oral Method: OECD Test Guideline 475 Result: negative
Germ cell mutagenicity- Assessment	: In vitro tests did not show mutagenic effects

Carcinogenicity**Components:****Citric acid monohydrate:**

Carcinogenicity - Assessment	: Not classifiable as a human carcinogen.
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Reproductive toxicity**Components:****Citric acid monohydrate:**

Effects on foetal development	: Species: Rat Application Route: Oral General Toxicity Maternal: NOAEL: 2,500 mg/kg body weight
Reproductive toxicity - Assessment	: No toxicity to reproduction

STOT - single exposure**Components:****Citric acid monohydrate:**

Remarks	: No data available
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STOT - repeated exposure**Components:****Citric acid monohydrate:**

Remarks	: No data available
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Date of first issue: 12.10.2007**Repeated dose toxicity****Components:****Citric acid monohydrate:**

Species	: Rat
NOAEL	: 4,000 mg/kg
LOAEL	: 8,000 mg/kg
Application Route	: Oral
Exposure time	: 10 d

Aspiration toxicity

No data available

Further information**Product:**

Remarks : No data is available on the product itself.

SECTION 12: Ecological information**12.1 Toxicity****Components:****Citric acid monohydrate:**

Toxicity to fish	: LC50 (Leuciscus idus (Golden orfe)): 440 - 760 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna): 85 - 120 mg/l Exposure time: 72 h
Toxicity to algae/aquatic plants	: NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l Exposure time: 8 Days Test Type: static test
Toxicity to microorganisms	: (Pseudomonas putida): > 10,000 mg/l Exposure time: 16 h

12.2 Persistence and degradability**Product:**Biodegradability : Result: Readily biodegradable.
Method: OECD 301D / EEC 84/449 C6**Components:****Citric acid monohydrate:**Biodegradability : Result: Readily biodegradable.
Biodegradation: 97 %

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Method: OECD Test Guideline 301B

12.3 Bioaccumulative potential**Components:****Citric acid monohydrate:**

Bioaccumulation

: Remarks: No bioaccumulation is to be expected (log Pow <= 4).

12.4 Mobility in soil**Components:****Citric acid monohydrate:**

Mobility

: Remarks: No data available

12.5 Results of PBT and vPvB assessment**Product:**

Assessment

: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects**Product:**

Additional ecological information

: No data is available on the product itself.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Product

: Dispose of the product according to the defined EWC (European Waste Code) No.

Contaminated packaging

: Take empty packaging to the recycling plant.

Waste key for the unused product

: European waste catalog (EWC) 070601

Waste key for the unused product(Group)

: Waste material of HZVA from fats, lubricants, soaps, detergents, disinfectants and personal protection products.

SECTION 14: Transport information**14.1 UN number**

ADR

: UN 3265

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IMDG : UN 3265
IATA : UN 3265

14.2 UN proper shipping name

ADR : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(citric acid)
IMDG : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(citric acid)
IATA : Corrosive liquid, acidic, organic, n.o.s.
(citric acid)

14.3 Transport hazard class(es)

ADR : 8
IMDG : 8
IATA : 8

14.4 Packing group

ADR
Packing group : III
Classification Code : C3
Hazard Identification Number : 80
Labels : 8
Tunnel restriction code : (E)
IMDG
Packing group : III
Labels : 8
EmS Code : F-A, S-B
IATA (Cargo)
Packing instruction (cargo aircraft) : 856
Packing instruction (LQ) : Y841
Packing group : III
Labels : Corrosive
IATA (Passenger)
Packing instruction (passenger aircraft) : 852
Packing instruction (LQ) : Y841
Packing group : III
Labels : Corrosive

14.5 Environmental hazards

ADR
Environmentally hazardous : no
IMDG
Marine pollutant : no

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14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

For personal protection see section 8.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Not applicable

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values.

15.2 Chemical safety assessment

Exempt

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SECTION 16: Other information**Full text of H-Statements**

H319 : Causes serious eye irritation.

Full text of other abbreviations

Eye Irrit. : Eye irritation

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; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information**Classification of the mixture:**

Met. Corr. 1	H290
Eye Irrit. 2	H319

Classification procedure:

Based on product data or assessment
Calculation method

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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