

### MUSCHELENTFERNER Art.-Nr. 975079S

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

### 1.1. Product identifier

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

#### Use of the substance/mixture

Washing and cleaning products

#### Uses advised against

No information available.

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

Company name:	Seilflechter-Tauwerk GmbH	
Street:	Auf dem Anger 7-9	
Place:	D-38110 Braunschweig	
Telephone:	+49(0)5307-9611-0	
e-mail:	info@seilflechter.de	
Contact person:	Abteilung Produktsicherheit	Telephone: +49(0)2233 9323 760
Responsible Department:	info@drkeddo.de	

### 1.4. Emergency telephone number:

+49 (0) 361-730730 (24 h, GIZ Erfurt)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No. 1272/2008

Hazard categories:

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Causes serious eye irritation.

### 2.2. Label elements

#### Regulation (EC) No. 1272/2008

Signal word: Warning

Pictograms:



#### Hazard statements

H319 Causes serious eye irritation.

#### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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.

P501 Dispose of contents/container to an appropriate recycling or disposal facility.

### 2.3. Other hazards

No information available.

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**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
617-48-1	DL-malic acid			30-40 %
	210-514-9		01-2119552463-40	
	Eye Irrit. 2; H319			
77-92-9	Citric acid			<20 %
	201-069-1		01-2119457026-42	
	Eye Irrit. 2; H319			

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

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

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

**After inhalation**

Remove casualty to fresh air and keep warm and at rest.  
If unconscious place in recovery position and seek medical advice.  
In case of respiratory tract irritation, consult a physician.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap.  
In case of skin irritation, consult a physician.

**After contact with eyes**

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.  
Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Rinse mouth immediately and drink plenty of 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**

No information available.

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

Let water be drunken in little sips (dilution effect). Do NOT induce vomiting.  
First Aid, decontamination, treatment of symptoms.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Dry extinguishing powder, alcohol resistant foam

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#### Unsuitable extinguishing media

Full water jet

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

In case of fire may be liberated:

Pyrolysis products, toxic; Nitrogen oxides (NOx); Carbon dioxide; Carbon monoxide

#### **5.3. Advice for firefighters**

Co-ordinate fire-fighting measures to the fire surroundings.

Special protective equipment for firefighters Protective clothing.

In case of fire: Wear self-contained breathing apparatus.

#### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

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

See protective measures under point 7 and 8.

Wear personal protection equipment (refer to section 8).

Provide adequate ventilation.

Remove persons to safety.

#### **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**

Take up mechanically. Take up dust-free and set down dust-free.

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

Do not use a brush or compressed air for cleaning surfaces or clothing.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

### SECTION 7: Handling and storage

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

See section 8.

Wear personal protection equipment (refer to section 8).

Avoid contact with eyes and skin.

Avoid dust formation.

Do not breathe dust.

Keep container tightly closed.

##### **Advice on protection against fire and explosion**

Usual measures for fire prevention.

Take precautionary measures against static discharges .

##### **Further information on handling**

Don't store containers without labelling.

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

##### **Requirements for storage rooms and vessels**

Keep/Store only in original container.

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

##### **Hints on joint storage**

Keep away from food, drink and animal feedingstuffs.

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#### Further information on storage conditions

No information available.

#### 7.3. Specific end use(s)

Observe instructions for use.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### DNEL/DMEL values

CAS No	Substance	DNEL type	Exposure route	Effect	Value
617-48-1	DL-malic acid				
		Worker DNEL, long-term	inhalation	systemic	5,33 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	systemic	104 mg/m <sup>3</sup>
		Worker DNEL, long-term	inhalation	local	32 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	local	104 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	2 mg/kg bw/day
		Worker DNEL, acute	dermal	systemic	40 mg/kg bw/day
		Worker DNEL, long-term	dermal	local	1 mg/cm <sup>2</sup>
		Worker DNEL, acute	dermal	local	1 mg/cm <sup>2</sup>
		Consumer DNEL, long-term	inhalation	systemic	1,6 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	systemic	52 mg/m <sup>3</sup>
		Consumer DNEL, long-term	inhalation	local	1,6 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	local	52 mg/m <sup>3</sup>
		Consumer DNEL, long-term	dermal	systemic	6 mg/kg bw/day
		Consumer DNEL, acute	dermal	systemic	20 mg/kg bw/day
		Consumer DNEL, long-term	dermal	local	0,5 mg/cm <sup>2</sup>
		Consumer DNEL, acute	dermal	local	0,4 mg/cm <sup>2</sup>
		Consumer DNEL, long-term	oral	systemic	6 mg/kg bw/day
		Consumer DNEL, acute	oral	systemic	20 mg/kg bw/day
77-92-9	Citric acid				

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**PNEC values**

CAS No	Substance	Value
Environmental compartment		
617-48-1	DL-malic acid	
Freshwater		0,1 mg/l
Freshwater (intermittent releases)		1 mg/l
Marine water		0,01 mg/l
Micro-organisms in sewage treatment plants (STP)		3 mg/l
77-92-9	Citric acid	
Freshwater		0,44 mg/l
Marine water		0,044 mg/l
Freshwater sediment		34,6 mg/kg
Marine sediment		3,46 mg/kg
Micro-organisms in sewage treatment plants (STP)		1000 mg/l
Soil		33,1 mg/kg

**8.2. Exposure controls****Appropriate engineering controls**

- Provide adequate ventilation.
- Recommendation: eye shower (label its location conspicuously)

**Protective and hygiene measures**

- Only wear fitting, comfortable and clean protective clothing.
- When using do not eat, drink, smoke, sniff.
- Avoid contact with eyes and skin.
- Wash hands before breaks and after work.
- Apply skin care products after work.
- Wash contaminated clothing prior to re-use.

**Eye/face protection**

- Dust protection eye glasses
- goggles

**Hand protection**

- Tested protective gloves must be worn: DIN EN 374
- Suitable material: NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)
- Thickness of the glove material:  $\geq 0,35$  (NBR (Nitrile rubber))
- permeation:  $\geq 8$  hour(s)
- The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
- Breakthrough times and swelling properties of the material must be taken into consideration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Observe the wear time limits as specified by the manufacturer.
- Check leak tightness/impermeability prior to use.

**Skin protection**

- Protective clothing.

**Respiratory protection**

- Usually no personal respirative protection necessary.
- Respiratory protection necessary at: exceeding exposure limit values, insufficient exhaust, insufficient ventilation
- The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Suitable respiratory protection apparatus: P1, white Particle filter device (DIN EN 143)

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#### Environmental exposure controls

See section 7. No additional measures necessary.

### SECTION 9: Physical and chemical properties

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

Physical state: solid  
Colour: transparent  
Odour: odourless

#### Test method

pH-Value (at 20 °C): >2

#### Changes in the physical state

Melting point: not applicable  
Initial boiling point and boiling range: not applicable

Flash point: >100 °C

Sustaining combustion: No data available

#### Flammability

Solid: not determined

Gas: not applicable

#### Explosive properties

dust explosive

Lower explosion limits: not determined

Upper explosion limits: not determined

#### Auto-ignition temperature

Solid: not determined

Gas: not applicable

Decomposition temperature: not determined

#### Oxidizing properties

Not oxidising.

Vapour pressure: not determined

Density: 1,16 g/cm<sup>3</sup>

Water solubility: completely miscible

#### Solubility in other solvents

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

#### 9.2. Other information

Solid content: not determined

No information available.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No information available.

#### 10.2. Chemical stability

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The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No information available.

**10.4. Conditions to avoid**

No information available.

**10.5. Incompatible materials**

Oxidising agent, strong ,  
Alkali (lye) ,  
Amines ,  
Alkali metals

**10.6. Hazardous decomposition products**

No information available.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name			
	Exposure route	Dose	Species	Source
617-48-1	DL-malic acid			
	oral	LD50 10700 mg/kg	Rat	Publication (1977)
77-92-9	Citric acid			
	oral	LD50 5400 mg/kg	Mouse	Study report (1981)
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2006)

**Irritation and corrosivity**

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Specific effects in experiment on an animal**

No information available.

**Practical experience****Observations relevant to classification**

No information available.

**Other observations**

No information available.

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#### Further information

There are no data available on the preparation/mixture itself.

### SECTION 12: Ecological information

#### 12.1. Toxicity

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h]   [d]	Species	Source
617-48-1	DL-malic acid				
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Danio rerio	Study report (2010)
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2010)
	Acute crustacea toxicity	EC50 ca. 240 mg/l	48 h	Daphnia sp.	Publication (1989)
	Acute bacteria toxicity	(> 300 mg/l)	3 h	activated sludge of a predominantly domestic sewage	Study report (2010)
77-92-9	Citric acid				
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Pimephales promelas	Photogr. Sci. Eng. 16(5):370-377 (1972)
	Acute crustacea toxicity	EC50 > 50 mg/l	48 h	other aquatic crustacea: Dreissena polymorpha	Environ.Toxicol.Chem. 16(9): 1930-1934 (
	Algae toxicity	NOEC 425 mg/l	8 d	Scenedesmus quadricauda	Water Research 14: 231-241 (1980)

#### 12.2. Persistence and degradability

No information available.

#### 12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
617-48-1	DL-malic acid	-1,27
77-92-9	Citric acid	-1,55

#### BCF

CAS No	Chemical name	BCF	Species	Source
77-92-9	Citric acid	3,2		In: (2009)

#### 12.4. Mobility in soil

No information available.

#### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

#### 12.6. Other adverse effects

No information available.

#### Further information

No information available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.



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hazardous waste HP 4

Dispose of waste according to applicable legislation.

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

070601 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; aqueous washing liquids and mother liquors; hazardous waste

#### Contaminated packaging

Dispose of waste according to applicable legislation.

Completely emptied packages can be recycled.

Cleaning agent: Water (with cleaning agent)

## SECTION 14: Transport information

### Land transport (ADR/RID)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

### Inland waterways transport (ADN)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

### Marine transport (IMDG)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

### Air transport (ICAO-TI/IATA-DGR)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### 14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

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

No dangerous good in sense of this transport regulation.

## SECTION 15: Regulatory information

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

#### EU regulatory information

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

#### National regulatory information

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Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

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

#### **15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:

DL-malic acid

Citric acid

### SECTION 16: Other information

#### **Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road )

RID: Règlement international conernat le transport des marchandises dangereuses par chemin de fer

(Regulations Concerning the International Transport of Dangerous Goods by Rail )

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Refulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures,

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

EC50: Effectice concentration, 50 percent

DNEL: Derived No Effect Level

PNEC: Predicted No Effect Concentration

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

#### **Relevant H and EUH statements (number and full text)**

H319 Causes serious eye irritation.

#### **Further Information**

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singulary responsible for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*