

Trade name: Unisol E

Substance number: 4383

Version: 1 / US

Replaces Version: - / US

Date revised: 16.11.2023

Print date: 16.11.2023

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

1.1. Product identifier

Unisol E

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

Use of the substance/preparation

Descaling agent for boiling out units

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Dreve Dentamid GmbH

Max-Planck-Straße 31

59423 Unna

Telephone no.

+49 2303 8807-0

Fax no.

+49 2303 8807-29

Information provided
by / telephone

Department Research & Development: Fax: +49 2303 8807-562

E-mail address of
person responsible
for this SDS

sicherheitsdatenblatt@dreve.com

1.4. Emergency telephone number

Henkel Fire Department / 24h-Emergency-Contact-No.: +49 211 797-3350

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to OSHA Hazard Communication Standard 29 CFR 1910:1200

Classification according to OSHA Hazard Communication Standard 29 CFR 1910:1200

Eye Irrit. 2

H319

2.2. Label elements

Labelling according to OSHA Hazard Communication Standard 29 CFR 1910:1200

Hazard pictograms



Signal word

Warning

Hazard statements

H319

Causes serious eye irritation.

Precautionary statements

Prevention

P264.1

Wash hands thoroughly after handling.



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

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

Supplemental information

No special hazards have to be mentioned.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients according to OSHA Hazard Communication Standard 29 CFR 1910:1200

Citric acid, monohydrate

CAS No.	5949-29-1		
Concentration	>=	50	%

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated, soaked clothing immediately and dispose of safely. Adhere to personal protective measures when giving first aid. Clean body thoroughly (bath, shower). In any case show the physician the Safety Data Sheet.

After inhalation

Ensure supply of fresh air. When vapours are intensively inhaled, seek medical help immediately.

After skin contact

Wash off immediately with soap and water. Take medical treatment.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Summon a doctor immediately.

After ingestion

If swallowed, seek medical advice immediately and show this container or label. Rinse mouth thoroughly with water. Let plenty of water be drunk in small gulps. Do not induce vomiting.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

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

Until now no symptoms known so far.

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

Hints for the physician / hazards

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Recommended: alcohol resistant foam, CO₂, powders, water spray/mist, Extinguishing measures to suit surroundings

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of combustion evolution of dangerous gases possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Do not inhale explosion and/or combustion gases. In case of combustion use a suitable breathing apparatus.

Other information

Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. In case the product spills into sewage waters, immediately inform the authorities.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material. Dispose of absorbed material in accordance with the regulations.

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid formation of aerosols. Perform filling operations only at stations with exhaust ventilation facilities. Provide suitable exhaust ventilation at the processing machines. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in original packaging, tightly closed. Storage rooms must be properly ventilated. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Provide solvent-resistant and

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impermeable floor.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other information

Contains no substances with occupational exposure limit values.

8.2. Exposure controls

General protective and hygiene measures

Hold eye wash fountain available. Hold emergency shower available. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Do not eat, drink or smoke during work time. Wash hands before breaks and after work. Clean skin thoroughly after work; apply skin cream.

Respiratory protection

Required in case of dust; Dust mask

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Hand protection must comply with EN 374.

Appropriate Material Butyl rubber

Eye protection

Safety glasses

Body protection

Clothing as usual in the chemical industry.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Crystalline powder
Colour	white
Odour	odourless
Odour threshold	
Remarks	not determined
pH value	
Remarks	not determined
Melting point	
Value	152 °C
Freezing point	
Remarks	not determined
Initial boiling point and boiling range	
Remarks	not determined
Flash point	
Remarks	Not applicable
Evaporation rate (ether = 1) :	



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Remarks not determined

Flammability (solid, gas)

not determined

Upper/lower flammability or explosive limits

Remarks not determined

Vapour pressure

Remarks not determined

Vapour density

Remarks not determined

Density

Value 1,54 g/cm³
Temperature 20 °C

Solubility in water

Remarks easily soluble

Solubility(ies)

Remarks not determined

Partition coefficient: n-octanol/water

Remarks not determined

Ignition temperature

Remarks not determined

Decomposition temperature

Remarks not determined

Viscosity

Remarks not determined

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

9.2. Other information

Other information

None known

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

No hazardous reactions known.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

No hazardous reactions known.

Decomposition temperature



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Remarks not determined

10.5. Incompatible materials

None known

10.6. Hazardous decomposition products

Irritant gases/vapours

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity

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

Acute oral toxicity (Components)

Citric acid, monohydrate

Species	mouse		
LD50	5400		mg/kg
Method	OECD 401		

Acute dermal toxicity

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

Acute dermal toxicity (Components)

Citric acid, monohydrate

Species	rat		
LD50	> 2000		mg/kg
Method	OECD 402		

Acute inhalational toxicity

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

Skin corrosion/irritation

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

Serious eye damage/irritation

evaluation	irritant
Remarks	The classification criteria are met.

Serious eye damage/irritation (Components)

Citric acid, monohydrate

evaluation	irritant
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Sensitization

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

Subacute, subchronic, chronic toxicity

Remarks not determined

Mutagenicity

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

Reproductive toxicity

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

Carcinogenicity

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

National Toxicology Program (NTP)

No component of this product present at levels greater than or equal to 0,1% is identified as a known or



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reasonably anticipated to be human carcinogen by NTP

International Agency for research on Cancer (IARC)

No component of this product present at levels greater than or equal to 0,1% is identified as probable, possible or confirmed human carcinogen by IARC

Specific Target Organ Toxicity (STOT)

Single exposure

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

Repeated exposure

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

Aspiration hazard

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

Experience in practice

Inhalation may lead to irritation of the respiratory tract.

Other information

No toxicological data are available.

SECTION 12: Ecological information

12.1. Toxicity

General information

not determined

Fish toxicity (Components)

Citric acid, monohydrate

Species	golden orfe (Leuciscus idus)		
LC50	440		mg/l
Duration of exposure	48	h	

Daphnia toxicity (Components)

Citric acid, monohydrate

Species	Daphnia magna		
EC50	1535		mg/l
Duration of exposure	24	h	

12.2. Persistence and degradability

General information

not determined

Ready degradability (Components)

Citric acid, monohydrate

Value	97		%
Duration of test	28	d	

12.3. Bioaccumulative potential

General information

not determined

Partition coefficient: n-octanol/water

Remarks not determined

12.4. Mobility in soil

General information



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not determined

12.5. Results of PBT and vPvB assessment

General information

not determined

Evaluation of persistence and bioaccumulation potential

The Substance does not meet PBT-criteria.

This substance does not meet the vPvB-criteria.

12.6. Other adverse effects

General information

not determined

General information / ecology

Do not allow to enter soil, waterways or waste water canal. Avoid release into the atmosphere.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Must not be disposed together with household garbage.

Allocation of a waste code number, according to the European Waste Catalogue (EWC), should be carried out in agreement with the regional waste disposal company.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

SECTION 14: Transport information

	Ground transport DOT	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number	The product does not constitute a hazardous substance in land transport.	The product does not constitute a hazardous substance in sea transport.	The product does not constitute a hazardous substance in air transport.
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)		-	-
Label			
14.4. Packing group		-	-

SECTION 15: Regulatory information



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

Other information

All components are contained in the TSCA inventory or exempted.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355)

The product does not contain any listed components.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

The product does not contain any listed components.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

Warning! This product may contain trace quantities of substance(s) known to the state of California to cause cancer and/or reproductive toxicity – not added as a part of the formulation but remaining as residuals from the manufacturing process of our raw material suppliers.

SECTION 16: Other information

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.