

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Brandenburger Ätzlösung

Revision date: 13.01.2021

Product code: 17564.xxxxx

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

1.1. Product identifier

Brandenburger Ätzlösung

Further trade names

This MSDS covers the following products in all container sizes:

- REF 17564.xxxxx Brandenburger Ätzlösung

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

Use of the substance/mixture

Use as laboratory reagent. Intended for scientific research and development.

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Manufacturer

| | | |
|---------------|--------------------------|-----------------------------------|
| Company name: | MORPHISTO GmbH | |
| Street: | Schumannstr. 142/144 | |
| Place: | D-63069 Offenbach | |
| Telephone: | +49 (0) 69 / 400 3019-60 | Telefax: +49 (0) 69 / 400 3019-64 |
| e-mail: | info@morphisto.de | |
| Internet: | http://www.morphisto.de | |

Supplier

| | | |
|---------------|--------------------------|-----------------------------------|
| Company name: | MORPHISTO GmbH | |
| Street: | Schumannstr. 142/144 | |
| Place: | D-63069 Offenbach | |
| Telephone: | +49 (0) 69 / 400 3019-60 | Telefax: +49 (0) 69 / 400 3019-64 |
| e-mail: | info@morphisto.de | |
| Internet: | http://www.morphisto.de | |

1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Substance or mixture corrosive to metals: Met. Corr. 1

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

May be corrosive to metals.

Causes severe skin burns and eye damage.

Causes serious eye damage.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Sodium laureth sulfatePicric acid:

Signal word: Danger

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Pictograms:

Hazard statements

H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.

Precautionary statements

P234 Keep only in original packaging.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P310 Immediately call a POISON CENTER/doctor.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P390 Absorb spillage to prevent material damage.
 P405 Store locked up.
 P406 Store in a corrosion-resistant container with a resistant inner liner.

Special labelling of certain mixtures

EUH001 Explosive when dry.

2.3. Other hazards

No information available.

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

| CAS No | Chemical name | | | Quantity |
|-----------|--|--------------|----------|------------|
| | EC No | Index No | REACH No | |
| | GHS Classification | | | |
| 3088-31-1 | Sodium laureth sulfate | | | 5 - < 10 % |
| | 500-234-8 | | | |
| | Skin Irrit. 2, Eye Dam. 1; H315 H318 | | | |
| 88-89-1 | 2,4,6-trinitrophenol; picric acid | | | 1 - < 5 % |
| | 201-865-9 | 609-009-00-X | | |
| | Expl. 1.1, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3; H201 H331 H311 H301 | | | |

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

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

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. Put

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victim at rest, cover with a blanket and keep warm. Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Provide fresh air. Medical treatment necessary. Put victim at rest, cover with a blanket and keep warm. If breathing is irregular or stopped, administer artificial respiration.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

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.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Irritation. Causes severe burns. Danger of blindness!

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Vapours can form explosive mixtures with air. Do not allow to dry.! Explosion hazard: Dry material is highly explosive. If the material especially larger amounts is affected by a fire, evacuate the area and let the material burn. If not affected by fire keep moist.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. 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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Do not dry up the product. Risk of explosion in case of drying up.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Clean contaminated articles and floor according to the environmental legislation. Risk of explosion in case of drying up.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Use extractor hood (laboratory). Do not breathe gas/fumes/vapour/spray. Always close containers tightly after the removal of product. Do not dry up the product. Wear personal protection equipment.

Advice on protection against fire and explosion

To avoid the risk of fire, do not allow this product to dry out.

Further information on handling

Do not eat, drink, smoke or sneeze at the workplace. Wear personal protection equipment (refer to section 8). Separate storage of work clothes. Take off contaminated clothing and wash it before reuse. Wash hands and face before breaks and after work and take a shower if necessary. Draw up and observe skin protection programme.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Unsuitable container/equipment material: Metal. Storage: Just as long as necessary. Do not dry up the product.

Hints on joint storage

Do not store together with: food and feed. pharmaceuticals. Infectious substances. Radioactive substances. Explosive substances. Oxidizing substances. Oxidizing liquids. Organic peroxides. Self-reactive substances and mixtures. Pyrophoric solids. Substances which in contact with water form flammable gases. Ammonium nitrate and preparations containing ammonium nitrate.

Further information on storage conditions

Keep away from heat. Protect against direct sunlight. Recommended storage temperature: 12-20°C.

7.3. Specific end use(s)

Use as laboratory reagent. Intended for scientific research and development.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|---------|-------------|-----|-------------------|-----------|---------------|--------|
| 88-89-1 | Picric acid | - | 0.1 | | TWA (8 h) | WEL |
| | | - | 0.3 | | STEL (15 min) | WEL |

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Use extractor hood (laboratory). Ensure adequate ventilation. Technical measures and the application of suitable work processes have priority over personal protection equipment.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat,

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drink, smoke, sniff.

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses. DIN EN 166

Hand protection

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

Suitable material: Pull-over gloves of rubber. EN ISO 374

Suitable material: penetration time (maximum wearing period): ≥ 8 h.

CR (polychloroprenes, Chloroprene rubber). 0,5mm.

NBR (Nitrile rubber). 0,35mm.

FKM (fluororubber). 0,4mm.

PVC (Polyvinyl chloride). 0,5mm.

Butyl rubber. 0,5mm.

Before using check leak tightness / impermeability.

Skin protection

Suitable protective clothing: Lab apron. When working with acids: PPE category: PPE cat. III - Protective equipment for high risk standards: EN 420, EN 388, EN 374, EN 407, Material: neoprene, neoprene on knitted fabric, liquid-tight.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Suitable respiratory protective equipment: @AllgK121505. Type: B-P2/ P3.

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

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

| | |
|----------------------|-----------|
| Physical state: | Liquid |
| Colour: | yellowish |
| Odour: | Irritant |
| pH-Value (at 20 °C): | 1,3 |

Changes in the physical state

| | |
|--|----------------|
| Melting point: | not determined |
| Initial boiling point and boiling range: | 100 °C |
| Flash point: | 150 °C |

Flammability

| | |
|--------|----------------|
| Solid: | not applicable |
| Gas: | not applicable |

Explosive properties

Explosion hazard: Dry material is highly explosive. If the material especially larger amounts is affected by a fire, evacuate the area and let the material burn. If not affected by fire keep moist.

| | |
|-------------------------|----------------|
| Lower explosion limits: | not determined |
| Upper explosion limits: | not determined |

Auto-ignition temperature

| | |
|--------|----------------|
| Solid: | not applicable |
| Gas: | not applicable |

| | |
|----------------------------|----------------|
| Decomposition temperature: | not determined |
|----------------------------|----------------|

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Oxidizing properties

Not oxidising.

Vapour pressure: 23 hPa
(at 20 °C)

Vapour pressure: 123 hPa
(at 50 °C)

Density: 1,02 g/cm³

Water solubility: easily soluble

Solubility in other solvents

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

Solvent content: 90,48 %

9.2. Other information

Solid content: 3,40 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals. Possibility of hazardous reactions.

10.2. Chemical stability

Do not allow to dry. Risk of explosion in case of drying up. Stable under normal storage and handling conditions.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Base, Peroxides, Oxidizing agent.

10.4. Conditions to avoid

Keep away from heat. Do not dry up the product.

10.5. Incompatible materials

Metal. Keep away from: Base, Oxidizing agent, Peroxides.

10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

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| CAS No | Chemical name | | | | | |
|-----------|-----------------------------------|---------------|----------|---------|--------------|--------|
| | Exposure route | Dose | | Species | Source | Method |
| 3088-31-1 | Sodium laureth sulfate | | | | | |
| | oral | LD50 mg/kg | 1995 | Rat | SDS external | |
| 88-89-1 | 2,4,6-trinitrophenol; picric acid | | | | | |
| | oral | LD50 mg/kg | 200 | Rat | RTECS | |
| | dermal | ATE mg/kg | 300 | | | |
| | inhalation vapour | ATE | 3 mg/l | | | |
| | inhalation aerosol | ATE | 0,5 mg/l | | | |

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

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.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

The product is not: Ecotoxic.

| CAS No | Chemical name | | | | | | |
|---------|-----------------------------------|------|----------|-----------|-------------------------|------------------|--------|
| | Aquatic toxicity | Dose | | [h] [d] | Species | Source | Method |
| 88-89-1 | 2,4,6-trinitrophenol; picric acid | | | | | | |
| | Acute fish toxicity | LC50 | 130 mg/l | 96 h | Cyprinodon variegatus | GESTIS | |
| | Acute crustacea toxicity | EC50 | 575 mg/l | 48 h | Scenedesmus subspicatus | (M)SDS (extern.) | |

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|---------|-----------------------------------|---------|
| 88-89-1 | 2,4,6-trinitrophenol; picric acid | 1,33 |

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

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The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|---|--|
| <u>14.1. UN number:</u> | UN 3265 |
| <u>14.2. UN proper shipping name:</u> | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,4,6-Trinitrophenol; Pikrinsa?ure) |
| <u>14.3. Transport hazard class(es):</u> | 8 |
| <u>14.4. Packing group:</u> | II |
| Hazard label: | 8 |



| | |
|--------------------------|-----|
| Classification code: | C3 |
| Special Provisions: | 274 |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |
| Transport category: | 2 |
| Hazard No: | 80 |
| Tunnel restriction code: | E |

Inland waterways transport (ADN)

| | |
|---|--|
| <u>14.1. UN number:</u> | UN 3265 |
| <u>14.2. UN proper shipping name:</u> | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,4,6-Trinitrophenol; Pikrinsa?ure) |
| <u>14.3. Transport hazard class(es):</u> | 8 |
| <u>14.4. Packing group:</u> | II |
| Hazard label: | 8 |



| | |
|----------------------|-----|
| Classification code: | C3 |
| Special Provisions: | 274 |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |

Marine transport (IMDG)

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14.1. UN number: UN 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (picric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (picric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Special Provisions: A3 A803
 Limited quantity Passenger: 0.5 L
 Passenger LQ: Y840
 Excepted quantity: E2
 IATA-packing instructions - Passenger: 851
 IATA-max. quantity - Passenger: 1 L
 IATA-packing instructions - Cargo: 855
 IATA-max. quantity - Cargo: 30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: strongly corrosive. Do not dry up the product. Explosive.

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
EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

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 juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

Rev.:1,00, 13.01.2021; New generation for the purpose of customer order.

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

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

| Classification | Classification procedure |
|--------------------|--------------------------|
| Met. Corr. 1; H290 | On basis of test data |
| Skin Corr. 1; H314 | On basis of test data |
| Eye Dam. 1; H318 | On basis of test data |

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Relevant H and EUH statements (number and full text)

| | |
|--------|--|
| H201 | Explosive; mass explosion hazard. |
| H290 | May be corrosive to metals. |
| H301 | Toxic if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| EUH001 | Explosive when dry. |

Further Information

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

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