

# Elektrolyt, zur Bestimmung der Porosität der Innenbeschichtung von Aluminiumtuben....

Revision date: 05.12.2023

Product code: 21902

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

#### 1.1. Product identifier

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UFI:

#### WDNX-K12M-M00Y-R0D7

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

# Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

# Uses advised against

Do not use for private purposes (household).

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

| Company name:            | AnalytiChem GmbH                  |   |
|--------------------------|-----------------------------------|---|
| Street:                  | Stempelstraße 6                   |   |
| Place:                   | D-47167 Duisburg                  |   |
| Telephone:               | 0203/5194-0                       | Telefax: 0203/5194-290  |
| E-mail:                  | info@analytichem.de               |   |
| Contact person:          | Abteilung Produktsicherheit       | Telephone: 0203/5194-107/117  |
| E-mail:                  | produktsicherheit@analytichem.de  |   |
| Internet:                | www.analytichem.de                |   |
| Responsible Department:  | Abteilung Produktsicherheit       |   |
| 1.4. Emergency telephone | For Hazardous Materials [or Dange | rous Goods] Incidents Spill, Leak, Fire,  |
| number:                  | •                                 | REC Day or Night Within USA and Canada:<br>Canada: +1 703-741-5970 (collect calls |

#### **Further Information**

inapplicable, this product is a mixture REACH registration number see section 3

# **SECTION 2: Hazards identification**

# 2.1. Classification of the substance or mixture

# GB CLP Regulation

Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### **GB CLP Regulation**

**Pictograms:** 



# Hazard statements

H411

Toxic to aquatic life with long lasting effects.

#### **Precautionary statements**

| ooddilonary oldi |   |
|------------------|---|
| P273             | Avoid release to the environment.   |
| P391             | Collect spillage.   |
| P501             | Dispose of contents/container to Dispose of contents/container in accordance with |
|                  | local/regional/national/international regulations.                                |



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# 2.3. Other hazards

No data available

# **SECTION 3: Composition/information on ingredients**

# 3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

#### Relevant ingredients

| CAS No    | Chemical name                                   | Chemical name                        |                        |  |
|-----------|---|--------------------------------------|------------------------|--|
|           | EC No   | Index No                             | REACH No               |  |
|           | Classification (GB CLP Regulation               | on)                                  |                        |  |
| 7758-98-7 | copper sulphate                                 |                                      |                        |  |
|           | 231-847-6                                       | 029-004-00-0                         |                        |  |
|           | Acute Tox. 4, Skin Irrit. 2, Eye D<br>H400 H410 | am. 1, Aquatic Acute 1, Aquatic Chro | onic 1; H302 H315 H318 |  |

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

| Specific Conc | Specific Conc. Limits, M-factors and ATE   |                 |          |  |  |
|---------------|--|-----------------|----------|--|--|
| CAS No        | EC No  | Chemical name   | Quantity |  |  |
|               | Specific Conc. Limits, M-factors and ATE   |                 |          |  |  |
| 7758-98-7     | 231-847-6  | copper sulphate | < 1 %    |  |  |
|               | dermal: LD50 = > 2000 mg/kg; oral: LD50 = 482 mg/kg Aquatic Acute 1; H400: M=10<br>Aquatic Chronic 1; H410: M=10 |                 |          |  |  |

# **Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

## **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

General information

No data available

# After inhalation

Provide fresh air.

# After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

# After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing.

## After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

No data available

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

No data available

#### **SECTION 5: Firefighting measures**



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# 5.1. Extinguishing media

# Suitable extinguishing media

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

# Unsuitable extinguishing media

no restriction

#### 5.2. Special hazards arising from the substance or mixture Non-combustible liquids

#### 5.3. Advice for firefighters

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

#### Additional information

Use water spray jet to protect personnel and to cool endangered containers. 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

## For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Remove persons to safety. Emergency procedures Consult an expert Do not breathe dust/fume/gas/mist/vapours/spray.

#### For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

## 6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

## For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

#### Other information

Provide adequate ventilation. Do not breathe dust/fume/gas/mist/vapours/spray. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

# 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

Handle and open container with care. Keep container tightly closed. Do not breathe vapour/aerosol.



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|--|---------------------|--------------|
| Avoid contact with skin, eyes and clothes.   |                     |              |
| Advice on protection against fire and explosion<br>Usual measures for fire prevention. |                     |              |
| Advice on general occupational hygiene   |                     |              |
| Wash contaminated clothing prior to re-use.  |                     |              |
| Do not breathe vapour/aerosol.   |                     |              |
| Avoid contact with skin, eyes and clothes.   |                     |              |

# Further information on handling

Wash contaminated clothing before reuse. Wash hands before breaks and after work.

# 7.2. Conditions for safe storage, including any incompatibilities

# Requirements for storage rooms and vessels

Keep container tightly closed.

# Hints on joint storage

No data available

# Further information on storage conditions

Store in a dry place.

# 7.3. Specific end use(s)

Laboratory chemicals

# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

# **PNEC** values

| CAS No   | Substance       |             |  |
|--|-----------------|-------------|--|
| Environmental compartment Value                  |                 |             |  |
| 7758-98-7  | copper sulphate |             |  |
| Freshwater                                       |                 | 0,0078 mg/l |  |
| Marine water                                     |                 | 0,0052 mg/l |  |
| Freshwater se                                    | diment          | 87 mg/kg    |  |
| Marine sedime                                    | ent             | 676 mg/kg   |  |
| Micro-organisms in sewage treatment plants (STP) |                 | 0,23 mg/l   |  |
| Soil   |                 | 65 mg/kg    |  |

# 8.2. Exposure controls

#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

# Individual protection measures, such as personal protective equipment

## Eye/face protection

goggles

#### Hand protection

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):

## By long-term hand contact Recommended glove articles: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11mm Wearing time with permanent contact: >480min



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By short-term hand contact Recommended glove articles: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11mm Wearing time with occasional contact (splashes): >480min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

## Skin protection

Wear suitable protective clothing.

Wash hands before breaks and after work.

# **Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation

## **Environmental exposure controls**

Do not allow to enter into surface water or drains.

# **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

|  | lical properties  |                   |
|--|-------------------|-------------------|
| 5  | Liquid            |                   |
| Colour:                                    | blue              |                   |
| 0.000                                      | odourless         |                   |
| Odour threshold:                           | No data available |                   |
| Melting point/freezing point:              |                   | No data available |
| Boiling point or initial boiling point and |                   | No data available |
| boiling range:                             |                   |                   |
| Flammability:                              |                   | No data available |
| Lower explosion limits:                    |                   | No data available |
| Upper explosion limits:                    |                   | No data available |
| Flash point:                               |                   | No data available |
| Auto-ignition temperature:                 |                   | No data available |
| Decomposition temperature:                 |                   | No data available |
| pH-Value:                                  |                   | 2,8               |
| Viscosity / kinematic:                     |                   | No data available |
| Water solubility:                          |                   | No data available |
| Solubility in other solvents               |                   |                   |
| No data available                          |                   |                   |
| Partition coefficient n-octanol/water:     |                   | No data available |
| Vapour pressure:                           |                   | No data available |
| Vapour pressure:                           |                   | No data available |
| Density:                                   |                   | 1,00556 g/cm³     |
| Bulk density:                              |                   | No data available |
| Relative vapour density:                   |                   | No data available |
| 9.2. Other information                     |                   |                   |
| Information with regard to physical haza   | rd classes        |                   |
| Explosive properties                       |                   |                   |
| No data available                          |                   |                   |
| Sustaining combustion:                     |                   | No data available |
| Self-ignition temperature                  |                   |                   |
| Solid:                                     |                   | No data available |



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|------------------------------|---------------------|--------------|
| Gas:<br>Oxidizing properties | No data available   |              |
| No data available            |                     |              |
| Other safety characteristics |                     |              |
| Evaporation rate:            | No data available   |              |
| Solvent separation test:     | No data available   |              |
| Solvent content:             | No data available   |              |
| Solid content:               | 0                   |              |
| Sublimation point:           | No data available   |              |
| Softening point:             | No data available   |              |
| Pour point:                  | No data available   |              |
| No data available:           |                     |              |
| Viscosity / dynamic:         | No data available   |              |
| Flow time:                   | No data available   |              |
| Further Information          |                     |              |

No data available

# SECTION 10: Stability and reactivity

## 10.1. Reactivity

No data available

# 10.2. Chemical stability

No data available

# 10.3. Possibility of hazardous reactions

No data available

# 10.4. Conditions to avoid

No data available

# 10.5. Incompatible materials

No data available

# 10.6. Hazardous decomposition products

No data available

# **Further information**

No data available

# **SECTION 11: Toxicological information**

# 11.1. Information on hazard classes as defined in GB CLP Regulation

#### Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

# Acute toxicity

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

## ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l



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| CAS No    | Chemical name   | Chemical name   |        |         |                     |                    |
|-----------|-----------------|-----------------|--------|---------|---------------------|--------------------|
|           | Exposure route  | Dose            |        | Species | Source              | Method             |
| 7758-98-7 | copper sulphate | copper sulphate |        |         |                     |                    |
|           | oral            | LD50<br>mg/kg   | 482    | Rat     | Study report (1994) | OECD Guideline 401 |
|           | dermal          | LD50<br>mg/kg   | > 2000 | Rat     | Study report (1993) | OECD Guideline 402 |

#### Irritation and corrosivity

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

There are no data available on the mixture itself.

#### Additional information on tests

There are no data available on the mixture itself.

### Practical experience

There are no data available on the mixture itself.

# 11.2. Information on other hazards

#### Other information

There are no data available on the mixture itself.

#### **Further information**

There are no data available on the mixture itself.

# **SECTION 12: Ecological information**

#### 12.1. Toxicity

There are no data available on the mixture itself.



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| CAS No    | Chemical name            |               |        |           |  |  |  |
|-----------|--------------------------|---------------|--------|-----------|--|--|--|
|           | Aquatic toxicity         | Dose          |        | [h]   [d] | Species  | Source   | Method   |
| 7758-98-7 | copper sulphate          |               |        |           |  |  |  |
|           | Acute fish toxicity      | LC50<br>mg/l  | 0,193  | 96 h      | Pimephales promelas                                      | Study report<br>(1996)                         | measurements<br>were conducted<br>by standard  |
|           | Acute algae toxicity     | ErC50<br>mg/l | 0,152  |           | Pseudokirchneriella<br>subcapitata                       | Publication (2005)                             | OECD Guideline<br>201                          |
|           | Acute crustacea toxicity | EC50<br>mg/l  | 0,007  | 48 h      | Daphnia magna  | Study report<br>(1978)                         | - Test were<br>conducted on<br>Daphnia magna t |
|           | Fish toxicity            | NOEC<br>mg/l  | 0,123  | 12 d      | Atherinops affinis                                       | Mar. Environ. Res.<br>31: 17-35 (1991)         | Three tests are<br>reported,<br>designed to de |
|           | Algae toxicity           | NOEC<br>mg/l  | 0,0102 |           | other aquatic plant:<br>giant kelp Macrocystis<br>pyrife | Mar. Ecol. Prog.<br>Ser. 68: 147 - 156<br>(199 | Tests were<br>conducted to<br>determine the ef |
|           | Crustacea toxicity       | NOEC<br>mg/l  | 0,033  |           | Penaeus mergulensis<br>and Penaeus<br>monodon            | Bull. Environ.<br>Contain. Toxicol.<br>(1995)  | The effects of<br>dissolved copper<br>on the g |

# 12.2. Persistence and degradability

There are no data available on the mixture itself.

# 12.3. Bioaccumulative potential

There are no data available on the mixture itself.

# BCF

| CAS No    | Chemical name   | BCF       | Species         | Source               |
|-----------|-----------------|-----------|-----------------|----------------------|
| 7758-98-7 | copper sulphate | 0,02 - 20 | Crangon crangon | Symp. Biologica. Hun |

#### 12.4. Mobility in soil

There are no data available on the mixture itself.

# 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH. There are no data available on the mixture itself.

# 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

# 12.7. Other adverse effects

There are no data available on the mixture itself.

### Further information

Do not allow to enter into surface water or drains.

# **SECTION 13: Disposal considerations**

# 13.1. Waste treatment methods

#### **Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Send to a physico-chemical treatment facility under observation of official regulations. Do not allow to enter into surface water or drains.

### Contaminated packaging

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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# **SECTION 14: Transport information**

| and transport (ADR/RID)                  |   |
|--|---|
| 14.1. UN number or ID number:            | UN 3082   |
| 14.2. UN proper shipping name:           | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (copper sulphate) |
| 14.3. Transport hazard class(es):        | 9   |
| 14.4. Packing group:                     | III   |
| Hazard label:                            | 9   |
| Classification code:                     | M6  |
| Special Provisions:                      | 274 335 375 601   |
| Limited quantity:                        | 5 L   |
| Excepted quantity:                       | E1  |
| Transport category:                      | 3   |
| Hazard No:                               | 90  |
| Tunnel restriction code:                 | -   |
| nland waterways transport (ADN)          |   |
| 14.1. UN number or ID number:            | UN 3082   |
| 14.2. UN proper shipping name:           | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (copper sulphate) |
| 14.3. Transport hazard class(es):        | 9   |
| 14.4. Packing group:                     | III   |
| Hazard label:                            | 9   |
| Classification code:                     | M6  |
| Special Provisions:                      | 274 335 375 601   |
| Limited quantity:                        | 5 L   |
| Excepted quantity:                       | E1  |
| Marine transport (IMDG)                  |   |
| 14.1. UN number or ID number:            | UN 3082   |
| 14.2. UN proper shipping name:           | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.                   |
| 14.2. On proper empony name.             | (copper sulphate)   |
| <u>14.3. Transport hazard class(es):</u> | 9   |
| 14.4. Packing group:                     |   |
| Hazard label:                            | 9   |
| Special Provisions:                      | 274, 335, 969   |
| Limited quantity:                        | 5 L   |
| Excepted quantity:                       | E1  |
| EmS:                                     | F-A, S-F  |
| Air transport (ICAO-TI/IATA-DGR)         |   |
| 14.1. UN number or ID number:            | UN 3082   |
| 14.2. UN proper shipping name:           | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (copper sulphate) |
| 14.3. Transport hazard class(es):        | 9   |
| 14.4. Packing group:                     | III   |
| Hazard label:                            | 9   |
| Special Provisions:                      | A97 A158 A197   |
| Limited quantity Passenger:              | 30 kg G   |
| Passenger LQ:                            | Y964  |
| Excepted quantity:                       | E1  |
| IATA-packing instructions - Passenger:   | 964   |
| IATA-max. quantity - Passenger:          | 450 L   |
| IATA-packing instructions - Cargo:       | 964   |
| IATA-max. quantity - Cargo:              | 450 L   |



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| 14.5. Environmental hazards                |                     |               |
| ENVIRONMENTALLY HAZARDOUS:                 | Yes                 |               |
| Danger releasing substance:                | copper sulphate     |               |
| 14.6. Special precautions for user         |                     |               |
| No dangerous good in sense of this tr      | ansport regulation. |               |
| 14.7. Maritime transport in bulk according | o IMO instruments   |               |

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

Restrictions on use (REACH, annex XVII): Entry 3, Entry 75

#### National regulatory information

Water hazard class (D):

3 - highly hazardous to water

### Additional information

No data available

# **SECTION 16: Other information**

## Changes

This data sheet contains changes from the previous version in section(s): 1,9.

# Abbreviations and acronyms

Acute Tox: Acute toxicity Skin Irrit: Skin irritation Eye Dam: Eye damage Aquatic Acute: Acute aquatic hazard Aquatic Chronic: Chronic aquatic hazard

## Classification for mixtures and used evaluation method according to GB CLP Regulation

| Classification          | Classification procedure |
|-------------------------|--------------------------|
| Aquatic Chronic 2; H411 | Calculation method       |

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

| Harmful if swallowed.                                 |
|---|
| Causes skin irritation.                               |
| Causes serious eye damage.                            |
| Very toxic to aquatic life.                           |
| Very toxic to aquatic life with long lasting effects. |
| Toxic to aquatic life with long lasting effects.      |
|   |

#### **Further Information**

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