



Trade name: Brightening electrolyte

1. Identification of the substance/preparation and of the company/undertaking

Product details:

Part number:

42,0411,8018

Use of the substance/preparation:

Brightening electrolyte solution

Manufacturer/Supplier:

Fronius International GmbH
Günter Fronius Straße 1
A-4600 Wels-Thalheim
Phone.: +43 / (0)7242 / 241-0
Fax: +43 / (0)7242 / 241-3940

Office to contact for information:

TSI (TechSupport International)
Phone.: +43 / (0)7242 / 241-3440
Fax: +43 / (0)7242 / 241-3930
e-mail: welding.techsupport@fronius.com
www.fronius.com

Emergency hotline:

Austrian Anti-Poison Center +43 / (0)1 / 4064343

2. Composition/Information on the ingredients

Chemical characterization:

Description:

Mixture of the substances mentioned below with non-hazardous additions

Dangerous constituents:

- > 20 % / phosphoric acid / C; R34 / CAS: 7664-38-2, EINECS: 231-633-2
- 10 -25 % / sulphuric acid / C; R35 / CAS: 7664-93-9, EINECS: 231-639-5

Additional information:

For the wording of the mentioned hazard notes see section 16.

3. Possible hazards

Hazards identification:

C Caustic



Information concerning particular hazards for human and environment:

R 34 Causes burns.

Classification system:

The classification is in accordance with the current EC lists. Further it is supplemented with information from technical literature and company information.

4. First-aid measures

General information:

Immediately remove contaminated garments

After inhalation:

Provide fresh air, consult a doctor in case symptoms develop

After skin contact:

- Immediately wash off with water and soap and rinse with plenty of water
- In case of persistent skin irritation, consult a physician.

After eye contact:

Rinse opened eye for several minutes with running water and consult a doctor

After swallowing:

- Do not induce vomiting, immediately consult a doctor
- Rinse out mouth and drink plenty of water.

5. Fire-fighting measures

Suitable extinguishing agents:

CO₂, sand, extinguishing powder. Do not use water!

For safety reasons unsuitable extinguishing agents:

water

Special exposure hazards arising from the substance or preparation itself, combustion products or resulting gases:

Formation of poisonous gases during heating or in fires.

Special protective equipment for fire-fighters:

Wear self-contained respiratory protective device

Further information:

Cool threatened containers with a water spray jet.

6. Accidental release measures

Person-related safety precautions

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Do not allow product to reach sewage system or any water course.

Measures for cleaning/collecting:

- Dispose of contaminated material as waste according to section 13.
- Use neutralising agent.
- Absorb with liquid-binding material (e.g. ABSODAN, sand, diatomite, all-purpose binder)
- Dispose of absorbed material in accordance with applicable regulations.

7. Handling and storage

Handling:

Information for safe handling:

- Store in tightly sealed containers in a cool and dry place.
- Ensure good ventilation at the workplace.
- To dilute product, always put in some water first and stir in product.

Information about protection against explosions and fires:

- Provide emergency cooling in case there is a fire in the vicinity
- Protect from heat.

Storage

Conditions required for storage rooms and vessels:

- Only use containers that are approved specifically for the substance/product.
- Provide acid-resistant floor.

Incompatible materials:

- Do not store together with alkalis (lyes).
- Keep away from metals.

Further information on storage conditions:

Keep container tightly sealed.

Storage class:

VCI: 8

8. Exposure controls and personal protection

Additional information about the design of technical systems:

no further details, see section 7

Components with limit values that require monitoring at the workplace:

- 7664-38-2 phosphoric acid
TLV (Austria): short-term value 2 mg/ m³, long-term value 1 mg/m³
- 7664-93-9 sulphuric acid
TLV (Austria): short-term value 2 E mg/m³, long-term value 1 E mg/m³
TLV (Germany): 1 E mg/m³, DFG

Additional information:

The lists valid during the making were used as basis.

Personal protective equipment:

General safety and hygiene measures:

- Keep away from human and animal food and drinks.
- Immediately take off contaminated or impregnated garments.
- Do not inhale gases/vapours/aerosols.
- Wash hands before breaks and after use.
- Avoid contact with eyes or skin.

Breathing equipment:

Use breathing equipment in the case of insufficient ventilation.

Protection of hands:

Protective gloves

The glove material must be impermeable and resistant to the product / substance / preparation.

No recommendation can be made as to the glove material to be used for the product / the preparation / the chemical mixture as no relating tests were performed.

Choose glove material depending on the respective breach times, permeation rates and degradation.

Glove material:

Any selection of a suitable glove depends not only on the material but also on other quality criteria that may differ among different manufacturers. The product being a preparation composed of various substances, the resistance of glove materials cannot be calculated and must therefore be tested prior to use.

Permeation time of the glove material:

Ask the protective glove manufacturer for the relevant breach time and adhere to it.

Eye protection:

tightly sealing safety goggles

Body protection:

- acid-resistant safety clothing
- suitable personal protective equipment
- use protective suit – protective shoes

9. Physical and chemical properties**General information:**

- | | |
|---------------|-----------|
| - Appearance: | liquid |
| - Colour: | blue |
| - Odour: | odourless |

Change of physical state:

- | | |
|--------------------------------|----------------|
| - Melting point/melting range: | not determined |
| - Boiling point/boiling range: | > 100 ° C |

Flashpoint:

not applicable

Explosion hazard:

The product is not explosive.

Vapour pressure at 20°C

< 0,03 hPa

Density at 20°C

appr. 1.39 g/cm³

Solubility in / miscibility with water:

fully miscible

PH value at 20°C:

highly acid

10. Stability and reactivity**Thermal decomposition / conditions to avoid:**

Do not overheat to avoid thermal decomposition.

Hazardous reactions:

- When diluting acid, always add acid to water, never water to acid.
- addition of water causes warming
- reacts with metals forming hydrogen.
- Reacts very violently with some bases as well as numerous organic substance classes such as alcohols and amines.

Dangerous products of decomposition:

- sulphur trioxide (SO₃) or SO₃ mist respectively
 - sulphur oxides (SO_x)
 - phosphoric oxides (e.g. P₂O₅)
-

11. Toxicological information**Acute toxicity:****Primary irritation effects:**

- on the skin: highly caustic effect on skin and mucous membranes
- on the eye: highly caustic effect
- sensitisation: no sensitising effect known

Additional toxicological information:

Ingestion has a highly caustic effect on the oral cavity and the pharynx and bears the risk of a perforation of the larynx or stomach.

On the basis of the calculation method set out in appendix B of the Austrian Chemicals Decree (Chemikalienverordnung) the product hazards are as follows:

- caustic
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12. Ecological information**Ecotoxicity:****Aquatic toxicity:**

	Test type	Effective concentration	Method Rating
Sulphuric acid:	golden orfe	25 mg/l	LC 50 -

General information:

- water hazard class 1 (self-assessment): weak hazard for waters
 - Do not allow product to reach groundwater, any water course or sewage system.
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13. Disposal considerations**Product:****Recommendation:**

Do not dispose of together with household waste. Do not allow product to reach sewage system.

Waste code number:

52102 acc. to ÖNORM S 2100
Acids and acid mixtures, inorganic

15. Austrian and EU regulations**Labelling acc. to EEC directives:****Code letter and hazard designation of product:**

C Caustic

Hazard-determining components of labelling:

Sulphuric acid:

Risk phrases

34 Causes burns

Safety phrases

- 1/2 Keep locked up and out of the reach of children
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 30 Never add water to this product
- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

National regulations:

The classification according to the Austrian ChemG BGBl. I 53/1997 is identical with the classification by EC directives

Water hazard class:

water hazard class 1 (self-assessment): weak hazard for waters

16. Other information

The information given in this material safety data sheet are valid for the mentioned product only. It may no longer apply if the product is processed or mixed with other substances. This information is based on our present knowledge and is intended to describe the product with a view to the safety precautions to take.

Relevant risk phrases

- 34 Causes burns
- 35 Causes severe burns