

# Material Safety Data Sheet

according to 91/155/EEC

ProMinent®

buffer-465 mV-03

Revision: 05-09-2005

## 1. Product and Company Identification

### Product Identification:

Buffer solution ORP- Part No.: 506240  
791439  
506241

### Company Identification:

REG- No.: HRB 1350 / Heidelberg

ProMinent Dosiertechnik GmbH  
69123 Heidelberg, Im Schuhmachergewann 5-11  
-Germany-  
Tel: +49 (0)6221 842-0

## 2. Composition / Information on Ingredients

Contains:

- Ferrous Ammonium Sulfate  $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2$  CAS No 10045-89-3 < 5 %
  - Ferric Ammonium Sulfate  $\text{NH}_4\text{Fe}(\text{SO}_4)_2$  CAS No 7783-83-7 < 5 %
  - Sulfuric Acid  $\text{H}_2\text{SO}_4$  CAS No 7664-93-9 < 10 %
- in aqueous solution according to DIN 38484 part 6.

Hazardous ingredients for health: contains 5 - 15 % sulfuric acid

Symbol: Xi ( irritant) R-phrased: 36/38

## 3. Hazards identification of the product

R 36/38: Irritating to eyes and skin

## 4. First aid measures

after skin contact: Rinse with running water and soap. Skin care.

Remove contaminated clothes.

after eye contact: Immediately flush eyes with copious amounts of running water (at least for 10 minutes) see an oculist.

After ingestion: Drink plenty of water. Immediately see a physician.

## 5. Fire-fighting measures

Suitable extinguishing media: are to be fit in with the environment. Escaping vapours are to be densified with water. Extinguishing media which must not be used for safety reasons: not applicable

Special exposure hazards : not flammable.

## 6. Accidental release measures

Personal Precautions: Avoid contact with skin and eyes.

Environmental precautions: Do not allow to flow into drainage system.

Methods of cleaning up / of removing: dilute with plenty of water, then neutralize with alkaline solutions, lime ( $\text{CaCO}_3$ ) or sodium bicarbonate ( $\text{NaHCO}_3$ ).

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## 7. Handling and storage

Handling: The product is to be handled with the usual care and caution for chemicals.

Storage: Keep original container tightly sealed.

## 8. Exposure / personal protection

Additional information on the system design: no further data, see item 7

Components with specific control parameters: none

Personal Protection:

Eye protection: necessary

Hand protection: necessary

## 9. Physical and chemical properties:

physical state: liquid

colour: light yellow

odour: inodorous

pH-value: approx. 0.5 (undiluted at 20 °C)

cold sensitivity: under -5 °C

flash point: not applicable

vapour pressure: (aqueous solution)

relative density: approx. 1.1 kg/l (20 °C)

solubility: miscible in water (20 °C)

## 10. Stability and Reactivity

Conditions to avoid: no decomposition if used according to specifications

Materials to avoid: reaction with lyes: heat generated

reaction with metals: hydrogen released

Hazardous decomposition products: none known

## 11. Toxicological Information

Quantitative data regarding the toxicology of the product are not known.

Ferrous Ammonium Sulfate LD50 : 3250 mg/kg (oral, rat)

Ferric Ammonium Sulfate LD50 : not available

Sulfuric Acid LD50 : 2140 mg/kg (oral, rat)

Skin contact: The product is irritant to mucous membranes.

## 12. Ecological Information

Data regarding persistence and degradability:

Degradability: not pertinent, inorganic product

aquatic toxicity: main hazardous effect by reducing the pH-value.

In case of discharging the acidic product into the sewerage system, the treated waste water should have a pH-value according to local discharge statutes.

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## 13. Disposal Considerations

In consultation with the responsible local authority, must be subjected to special treatment: neutralisation. In case of chemical collecting actions of the authorities, small containers can be handed over together with this safety data sheet.

## 14. Transport Information

The product is a hazardous material according to the transport norms:

GGVS/ADR/GGVE/RID : class 8/1b

IMDG-Code : 8/II UN 2796

ICAO/IATA : 8 UN 2796 PAX 809 CAO 813

## 15. Regulations

Classification and labelling according to the norm for hazardous materials annex II No 1

dated on Nov. 1st 1993:

Symbols of danger: Xi irritant

Ingredients: not applicable

R-phrases: R 36/38: irritating to eyes and skin

S-phrases: S 1 : to be kept under lock and key

S 2 : keep out of reach of children

S 26: avoid contact with eyes - in case of contact with eyes, immediately flush with water and see an oculist

S 46: in case of ingestion immediately see a physician and show the packaging or label

National Prescriptions: water hazard class (WGK): 1

## 16. Other Information

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Since ProMinent cannot anticipate or control the conditions under which this product may be used, each user must, before using this product, assess and control the risks arising from their use of this product.