

# Zinc sulfate heptahydrate, for analysis, ExpertQ®, ACS, ISO, Reag. Ph Eur

## Identification

ZnSO<sub>4</sub>·7H<sub>2</sub>O  
M = 287,54 g/mol  
CAS [7446-20-0]  
EC number: 231-793-3  
Taric code: 2833 29 20

## Synonyms

Sulfuric acid zinc salt heptahydrate, Zinc vitriol

## Applications

analytical chemistry, laboratory reagent, in galvanotechnia, for deproteinating blood and urine.

## Specifications

|                                  |                      |                     |              |
|----------------------------------|----------------------|---------------------|--------------|
| assay (complexometric).....      | 99,5 - 103,0 %       | arsenic (As).....   | max. 0,5 ppm |
| identity (IR-spectrum).....      | passes test          | cadmium (Cd).....   | max. 5 ppm   |
| appearance of solution.....      | clear and colourless | calcium (Ca).....   | max. 0,001 % |
| insoluble in water.....          | max. 0,01 %          | copper (Cu).....    | max. 5 ppm   |
| pH (5 %, H <sub>2</sub> O).....  | 4,4 - 5,6            | iron (Fe).....      | max. 5 ppm   |
| chlorides (Cl).....              | max. 5 ppm           | lead (Pb).....      | max. 0,001 % |
| nitrites (NO <sub>2</sub> )..... | max. 0,002 %         | magnesium (Mg)..... | max. 0,001 % |
| total nitrogen (as N).....       | max. 0,001 %         | manganese (Mn)..... | max. 3 ppm   |
| ammonium (NH <sub>4</sub> )..... | max. 0,001 %         | potassium (K).....  | max. 0,001 % |
|                                  |                      | sodium (Na).....    | max. 0,001 % |

## Physical data

- Appearance: crystals, white
- Spec. Density: 1,97 g/cm<sup>3</sup>
- Bulk density: ~ 800 - 1000 kg/m<sup>3</sup>
- Solub. in water: (20 °C): 960 g/l
- Melting point: ~ 40 °C (decomposes)
- pH(50 g/l H<sub>2</sub>O, 20 °C) ~ 4 - 6

## Safety - GHS

**Signal Word:** Danger

### Hazard Statements:

- H318: Causes serious eye damage.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.  
H302: Harmful if swallowed.



### Precautionary Statements:

- P280: Wear protective gloves / protective clothing / eye protection / face protection.  
P273: Avoid release to the environment.  
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 or doctor / physician.  
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P501a: Dispose of contents / container in accordance with local / regional / national / international regulations.

## Transport/storage

- ADR: 9 M7 III • UN 3077 • ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Zinc sulfate heptahydrate)
- IMDG: 9 III • UN 3077 • ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Zinc sulfate heptahydrate)
- IATA/ICAO: 9 III • UN 3077 • ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Zinc sulfate heptahydrate)
- PAX: 911
- CAO: 911
- 10°C - 30°C