

**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 galvanotechnology, 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 %
nitrates (NO <sub>3</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