

**Manganese(II) sulfate monohydrate, for analysis, ExpertQ®, ACS,  
Reag. Ph Eur****Identification**

MnSO<sub>4</sub>·H<sub>2</sub>O  
M = 169,02 g/mol  
CAS [10034-96-5]  
EC number: 232-089-9  
Taric code: 2833 29 90

**Applications**

analytical chemistry, in porcelain industry.

**Specifications**

assay (complexometric).....	98,0 - 101,0 %	iron (Fe).....	max. 0,001 %
identity (IR-spectrum).....	passes test	lead (Pb).....	max. 0,001 %
appearance of solution.....	passes test	magnesium (Mg).....	max. 0,005 %
insoluble in water.....	max. 0,01 %	nickel (Ni).....	max. 5 ppm
chlorides (Cl).....	max. 0,001 %	potassium (K).....	max. 0,005 %
calcium (Ca).....	max. 0,005 %	sodium (Na).....	max. 0,005 %
copper (Cu).....	max. 5 ppm	zinc (Zn).....	max. 0,005 %
heavy metals (as Pb).....	max. 0,001 %	substances reducing KMnO <sub>4</sub> .....	passes test
		residue on ignition (500 °C).....	10,0 - 12,0 %

**Physical data**

- Appearance: lumpy powder, pink
- Spec. Density: 2,95 g/cm<sup>3</sup>
- Bulk density: ~ 1000 - 1200 kg/m<sup>3</sup>
- Solub. in water: (20 °C): 762 g/l
- Melting point: 117 °C (decomposes)
- pH(50 g/l H<sub>2</sub>O, 20°C) 3,0 - 3,5

**Safety - GHS**

Signal Word: Warning

**Hazard Statements:**

- H373: May cause damage to organs through prolonged or repeated exposure.  
H411: Toxic to aquatic life with long lasting effects.

**Precautionary Statements:**

- P260: Do not breathe dust / fume / gas / mist / vapours / spray.  
P273: Avoid release to the environment.  
P314: Get medical advice / attention if you feel unwell.  
P391: Collect spillage.  
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.(Manganese(II) sulfate monohydrate)
- IMDG: 9 III • UN 3077 • ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Manganese(II) sulfate monohydrate)
- IATA/ICAO: 9 III • UN 3077 • ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Manganese(II) sulfate monohydrate)
- PAX: 911
- CAO: 911
- 10°C - 30°C