



## Iron(II) chloride tetrahydrate, 99+%

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| General  |   |  |   |                       |
|--|---|--|---|-----------------------|
| Product Name   | Iron(II) chloride tetrahydrate<br>Ferrous chloride tetrahydrate   |  |   |                       |
| CAS RN   | 13478-10-9  |  |   |                       |
| ACD Code   | MFCD00149709  |  |   |                       |
| Structure  |   |  |   |                       |
| Molecular Formula  | Cl <sub>2</sub> Fe . 4 H <sub>2</sub> O   |  |   |                       |
| Molecular weight   | 198.81  |  |   |                       |
| Pack size  | {Error}   |  |   |                       |
| Physical   |   |  |   |                       |
| Melting Point (°C)   | 105 - 110   |  |   |                       |
| Safety   |   |  |   |                       |
| GHS Pictogram  |   |  |   |                       |
| GHS Signal Word  | Danger  |  |   |                       |
| GHS H statement  | H302: Harmful if swallowed<br>H318: Causes serious eye damage<br>H314: Causes severe skin burns and eye damage  |  |   |                       |
| GHS P statement  | P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting<br>P280: Wear eye protection/face protection<br>P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing<br>P310: Immediately call a POISON CENTER or doctor/physician<br>P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell |  |   |                       |
| Hazard   | C: Corrosive  |  |   |                       |
| Risk   | 22: Harmful if swallowed.<br>34: Causes burns.  |  |   |                       |
| Safety   | 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>36/37/39: Wear suitable protective clothing, gloves and eye/face protection.<br>45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  |  |   |                       |
| Categories   |   |  |   |                       |
| Functional Reagents > Catalysis and Inorganic Chemistry > Iron<br>Preparation, Purification and Analysis > Analytical Reagents for General Use |   |  |   |                       |
| Applications   |   |  |   |                       |
| Function   | Transformation  | Type   | Caveat  | Reference             |
| Reagent  | Interconversion of functional groups  | Amine to aryl halide   | Can replace Copper (II) chloride in Sandmeyer reaction  | CA 1971, 74, 31, 594d |
| Reagent  | Reduction   | Alkyne to alkene   | In combination with simple dithiols and sodium borohydride are effective catalysts for reduction. | CL 1985, 1951         |
| Other  |   |  |   |                       |
| Parameter  | Solubility  | Solubility in water: 1600 g/L (10°C) 4100 g/L (100°C)  | Solubility in other solvents: Soluble in alcohol  |                       |
|  | Origin  | synthetic  |   |                       |
|  | References:   | Literature Chemoselective oxidation: Barton D.H.R. et al.; Tetrahedron 46, 11, 3743-3752 (1990). |   |                       |
|  | Reference:  | Merck 14,4043  |   |                       |
| 3D model   | <a href="#">Show</a>  |  |   |                       |