

**IS 711 : 2023**  
**FERRIC CHLORIDE, TECHNICAL — SPECIFICATION**

This Indian Standard prescribes the requirements and the methods of sampling and test for ferric chloride, technical, chiefly used as coagulant in water purification, in the manufacture of glycerine, in etching glass plates and in photo-engravings.

The standard requires Ferric Chloride to be available in one of the following forms:

**Anhydrous Powder:** The material of this form shall be greenish black, crystalline powder, extremely hygroscopic, becoming orange coloured on hydration.

**Hydrated:** The material of this form shall be brownish yellow, deliquescent, crystalline lumps.

**Liquid:** The material of this form shall be a clear dark brown, viscous liquid, free from sediments or suspended matter or other visible impurities.

The table -1 of this standard has set requirements for following characteristics to which the ferric chloride shall comply: Relative Density at 25°C/25°C Ferric chloride (as FeCl<sub>3</sub>), percent by weight Free acid (HCl), percent by weight Basicity (as Fe<sub>2</sub>O<sub>3</sub>), percent by weight Ferrous salts (as FeCl<sub>2</sub>), percent by weight Insoluble matter, percent by weight Free chlorine (as Cl), percent by weight Sulphates (as SO<sub>4</sub>), percent by weight Nitrates (as NO<sub>3</sub>), percent by weight Alkalis and alkaline earths (expressed as sulphates), percent by weight Copper (as Cu), percent by weight Zinc (as Zn), percent by weight Arsenic (as As<sub>2</sub>O<sub>3</sub>), ppm Cyanide (as CN<sup>-</sup>), ppm Cadmium (as Cd), ppm Chromium (as Cr), ppm Lead (as Pb), ppm Mercury (as Hg), ppm Nickel (as Ni), ppm Selenium (as Se), ppm.

Annex-A has listed the referred standards and Annex-B provides Method of Tests for above characteristics.

The **IS 711:2023** hence ensures that ferric chloride used in India is **safe, effective, and of high quality**. With strict limits on impurities and detailed test methods, this standard plays a crucial role in **water purification, in manufacture of glycerine, in etching glass plates and in photo-engravings**.