

Iron(III) chloride, also called ferric chloride, is an industrial scale commodity chemical compound, with the formula FeCl_3 . The colour of iron(III) chloride crystals depends on the viewing angle: by reflected light the crystals appear dark green, but by transmitted light they appear purple-red. Anhydrous iron(III) chloride is deliquescent, forming hydrated hydrogen chloridemists in moist air.

When dissolved in water, iron(III) chloride undergoes hydrolysis and gives off heat in an exothermic reaction. The resulting brown, acidic, and corrosive solution is used as a flocculant in sewage treatment and drinking water production, and as anetchant for copper-based metals in printed circuit boards. Anhydrous iron(III) chloride is a fairly strong Lewis acid, and it is used as a catalyst in organic synthesis.

Iron(III) chloride undergoes hydrolysis to give an acidic solution. When heated with iron(III) oxide at $350\text{ }^\circ\text{C}$, iron(III) chloride gives iron oxychloride, a layered solid and intercalation host.

Iron(III) chloride is toxic, highly corrosive and acidic. The anhydrous material is a powerful dehydrating agent. Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator). Corrosive to eyes and skin. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death.