

# Download Formula For Chromium Sulfate

Hydrated chromium(III) sulfate,  $\text{Cr}_2(\text{SO}_4)_3 \cdot 18\text{H}_2\text{O}$ , (CAS #13520-66-6) is a violet solid that readily dissolves in water to give the metal aquo complex,  $[\text{Cr}(\text{H}_2\text{O})_6]^{3+}$ . The formula of this compound can be written more descriptively as  $[\text{Cr}(\text{H}_2\text{O})_6]_2(\text{SO}_4)_3 \cdot 6\text{H}_2\text{O}$ . Six of the 18 water molecules in this formula unit are water of crystallization. Chromium(II) sulfate refers to inorganic compounds with the chemical formula  $\text{CrSO}_4 \cdot n\text{H}_2\text{O}$ . Several closely related hydrated salts are known. The pentahydrate is a blue solid that dissolves readily in water. There is no need to have two chromium ions and two sulfate ions like in the formula  $\text{Cr}_2(\text{SO}_4)_2$  because the charges already cancel each other out. You only need one of each ion. Since Cr(III) has a valence of 3 and the sulfate radical  $\text{SO}_4$  has a valence of 2, then you need 2 x Cr and 3 x  $\text{SO}_4$  to equal the 6 valence ties. Therefore, Cr(III) sulfate is  $\text{Cr}_2(\text{SO}_4)_3$ . However, it is interesting to note that there are 3 common hydr...