# NS6130-12-001427

# YTTRIUM IRON OXIDE **Nanoparticles**

Yttrium iron oxide (Y3Fe5O12) nanopowder are available in ultra high purity passivated form, dispersed, nanofluidic, nanowhiskers and nanocomposits. This material finds applications in manufacture of fuel layer cells, bio nano materials, bio sensors, textiles etc. Yttrium belongs to Block D, Period 5 and Iron to Block D, Period 4 and oxygen to the Block P and 2nd Period in the periodic table. Some of the other names by which this powder is known are yttrium ferrite garnet, Iron yttrium oxide and yttrium iron garnet (YIG). Yttrium iron garnets which are derived from yttrium oxide are used as powerful microwave filters. Yttrium oxide is a vital starting point in inorganic synthesis of compounds. The property of red light emission is used in making fluorescent lamps. They are also used as additives in the coatings used in high-temperature applications, paints and plastics for guarding against UV degradation and also in making permanent magnets.



## Quick Facts

**Product** Yttrium Iron Oxide Nanoparticles

Stock No NS6130-12-001427 CAS 12253-70-2 **Form** Powder **Purity** 99.9% APS 100nm

### **Technical Specification**

Y3Fe5O12 Molecular Formula **Molecular Weight** 737.94 g/mol Density 6.95 g/cm3 **Melting Point** 5.11g/cm3

### **Applications**

- Polymers, textiles
- Fuel cell layers.
- Composites and solar energy materials,
- Bio nano materials and bio sensors



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