

TECHNICAL DATA SHEET 607

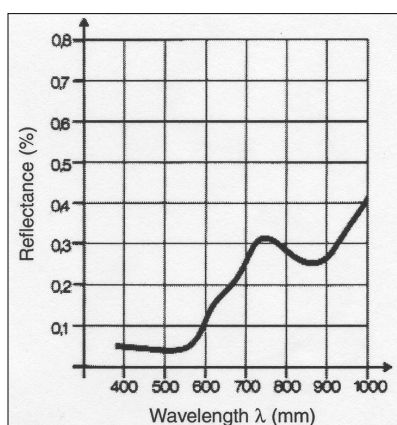
Page 1 of 1

Red Iron Oxide Particles, 0.3–0.8 μ m

Catalog Number: 07674

DESCRIPTION

Red Iron Oxide particles are produced from Black Iron Oxide particles by oxidation and calcination (see Technical Data Sheet #605). The red pigments are produced by calcination of the Black Iron Oxide paste in a rotary kiln at temperatures ranging from 700° to 900°C (approx. 1300-1650°F). After the calcining step, the particles are milled. Micronized grades such as our Red Iron Oxide Particles are milled on a jet mill, which provides very intensive milling. Red Iron Oxide (α -Fe₂O₃) provides the best heat stability among the three basic types of iron oxide pigments. This pigment is temperature-stable up to 1000°C and therefore can be used in a wide variety of applications. Black Iron Oxide starts to change color from black to brown and finally red at temperatures about 180°C (365°F). This color change is caused by an oxidation from Fe₃O₄ (black) to γ -Fe₂O₃ (brown) finally to α -Fe₂O₃ (red). Although chemically identical, the color shade of Red Iron Oxides changes from a light, salmon shade to a dark purplish red as the predominant particle size increases. The relative tinting strength passes through a maxim at a medium particle size of approx. 0.3 μ m. Micronized Red Iron Oxide particles are used primarily in coatings and are characterized by the products excellent dispersibility and high tinting strength when compared to non-micronized grades. These micronized grades are suitable for dispersion on Cowels type dissolvers in the manufacturing of paints and coatings. When formulating primers with micronized red iron oxide particles, better corrosion inhibiting properties were found in salt spray and outdoor exposure tests.



ORDERING INFORMATION

Cat. #	Description	Size
07674-1	Red Iron Oxide Particles	1.0g

TECHNICAL DATA

- Oil Abs (g/100g): 22
- Tap Dens. (g/ml): 1.2
- 325 Mesh Retent. (%): 0.001
- Fe₂O₃ (%): 96 - 97
- SiO₂ + Al₂O₃ (%): 3
- Wat. Sol. (%): 0.3
- Ignition Loss (0.5h/1000°C): 0.4
- pH: 6.0
- Spec. Grav. (g/ml): 5.1
- Particle Shape: Spheroidal
- Predominant Particle Size (μ m): 0.4

These products are for research use only and are not intended for use in humans or for *in vitro* diagnostic use.

TO ORDER

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