Technical Data

ROCKWOOD PIGMENTS
Colors • Systems • Solutions

Chromium Oxide Pigments

The Rockwood line of synthetic chromium oxides are manufactured by the reduction of alkali chromates at Elevated temperatures with subsequent to be wash, dry and milling. These high purity materials are represented by the formula, Cr_2O_3 and often referred to as Chromic Oxide, Chromium Green, and Chrome Oxide. They should not be confused with Iron Blue-Chrome Yellow blends commonly known as Chrome Green.

The outstanding characteristics of the chromium oxides, as compared to other green pigments, are their stability and performance. They are unaffected by acids, alkalis, paint vehicles, and solvents, and possess excellent lightfastness and weatherability. The Pure Chromium Oxides, in particular, are very heat stable, even at ceramic temperatures. Tests in our laboratory at 1400°F for one hour, show practically no color change and they have been found to be usable in suitable binders up to 2000°F. Rockwood Chromium Oxides have outstanding purity and are characterized by their close lot-to-lot uniformity.

Pure chromium oxides find wide applications in paints and coatings, enamels, concrete and other building products, floor coverings, and other uses where permanence of color is paramount. They are also used as catalysts where chemical composition and physical properties other than color are important.

Rockwood supplies four (4) grades of chromium oxide; a lighter, yellow-green grade, G-4099, a medium green grade, G-5099, a darker grade, G-6099, and a camouflage grade, G-8599. The G-4099 and G-6099 are available as higher purity materials meeting FDA and CTFA specifications for cosmetic use. Separate technical information is available for these materials.

G-8599 is a dark green pigment with high infrared reflectance specially designed for use in camouflage coatings. When combined with cobalt bearing mixed metal oxides, it provides the basis for practical, cost efficient pigmentation to meet military specification coatings. G-85 is easily dispersed in and compatible with the resin systems specified for camouflage coatings. Separate formulation information is available for this material.

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TYPICAL PROPERTIES

(Data Below Apply To All Chromium Oxides)

Formula	**Cr_2O_3**
Particle Shape	**Spheroidal**
Cr_2O_3 Content, %	**99**
Specific Gravity	**5.10**
+325 Mesh Retention, %	**0.10**
Water Soluble Salts, %	**0.15**
H_2O, %	**0.20**

Product	Avg. Particle Size (μ)	Specific Surface Area (m^2/g)	Oil Absorption (g/100g)	Tapped Density (g/cc)	pH
G-4099	0.6	5.5	23	1.10	8.5
G-5099	0.7	3.9	12	1.00	7.0
G-6099	0.8	3.2	22	1.35	8.0
G-8599	1.7	1.2	14	1.26	7.5

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