

## CHROMIC OXIDE (G-4099)

**PROPERTIES:** EEC No. 215-160-9

**Chemical Formula:** Cr<sub>2</sub>O<sub>3</sub>      **Stability in Air:** Completely Stable

**CAS Number:** 1308-38-9      **Solubility in Water:** Insoluble

**Molecular Weight:** 151.99

**Pigment Classification:** Pigment Green 17; C.I. 77288

**Appearance:** Green Powder

**Behavior on Heating:** Stable. Melts at 2435 °C (4415 °F)

**Specific Gravity:** 5.22

**Particle Shape:** Spheroidal

### CHEMICAL CHARACTERISTICS:

Inert except under very vigorous conditions. Reacts slowly in hot concentrated sulfuric acid. Oxidizes in hot perchloric acid. Also reacts with molten alkali at high temperatures, specifically under oxidizing conditions. Not readily reduced by hydrogen or carbon monoxide - high temperatures and pressures are required.

### TYPICAL ANALYSIS: \*

Chromium as Cr <sub>2</sub> O <sub>3</sub> , %	99.5
Water Soluble Salts, %	0.1
Moisture at 110 °C, %	0.2
Specific Surface Area (BET m <sup>2</sup> /gm)	5.0
Retention on 45 micron (325 mesh) screen, %	0.01
pH	6.5

\* Data represent normal production values and may be slightly higher or lower for actual production.

### GENERAL APPLICATIONS:

Pigment Grade Chromium Oxides find a variety of applications in paints and coatings, enamels, concrete and other building products, floor coverings, and in 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.

Characteristics of the Pigment Grade Chromium Oxides, as compared to other green pigments, are their stability and performance. They are unaffected by acids, alkalis, paint vehicles and solvents, and they possess excellent durability against light, harsh weather and extremely high temperatures (such as those used in firing of ceramics).

G-4099 is a light yellowish-green powder and is also available as a higher purity material that meets FDA and CTFA specifications for cosmetic use.

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## CHROMIC ACID SOLUTION CLF (500)

### HEALTH AND SAFETY PRECAUTIONS:

Chromium (III) Oxide may be regarded as essentially nontoxic. However, excessive exposure may cause irritation to the eyes, skin or lungs. Appropriate precautions should be observed in handling to minimize skin contact and to maintain air concentrations below the TLV of 0.5 mg Cr/m<sup>3</sup>. For detailed information, consult our Safety Data Sheet (SDS), which is available upon request.

### STORAGE:

Indefinite shelf life when stored under conditions that prevent degradation of the packaging.

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