

Chromic Oxide – METALLURGICAL

PROPERTIES:

EEC No. 215-160-9

Chemical Formula: Cr₂O₃

CAS Number: 1308-38-9

Molecular Weight: 151.99

Appearance: Dark Green Powder

Specific Gravity: 5.22 gm/cm³

Stability in Air: Completely Stable

Solubility in Water: Insoluble

Particle Shape: Spheroidal

Behavior on Heating: Completely stable. Melts at 2435 °C (4415 °F)

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 ₂ O ₃ , %	99.7
Other Metal Oxides (mainly aluminum, iron, magnesium), %	0.05
Moisture at 110°C, %	0.03
Retention on 45 micron (325 mesh) screen, %	0.09
Average Particle Size microns	5.5
pH	8.5
Bulk density (g/cm ³) approximately	0.9

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

GENERAL APPLICATIONS:

The major use of Chromium Oxide Metallurgical is in the production of high purity chromium metal. When mixed with aluminum and potassium dichromate, using the alumino-thermic process, chromic oxide produces high purity chromium metal. This is a vital ingredient in the production of the high performance super-alloys used in the aerospace industry.

HEALTH AND SAFETY PRECAUTIONS:

Chromium Oxide may be regarded as essentially nontoxic. Excessive exposure, however, 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/m³ Cr. 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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