

Chromium Trioxide CrO_3

Sulfate Flake & Electrolytic Crystal Grades · Purple-Red to Ruby Crystals · UN 1463 / DG Class 5.1

★ Electrolytic Crystal Grade: $\text{CrO}_3 \geq 99.9\%$ — MIL-C-23422, AMS 2460 & BAC 5709 compliant for aerospace hard chrome.

GRADE SPECIFICATIONS

PARAMETER	SUPERIOR	FIRST	QUALIFIED	ELECTROLYTIC CRYSTAL
Process	Sulfate	Sulfate	Sulfate	Electrolytic
Appearance	Purple-Red Flakes	Purple-Red Flakes	Purple-Red Flakes	Ruby-Red Crystals
CrO_3 Content	$\geq 99.8\%$	$\geq 99.6\%$	$\geq 99.2\%$	$\geq 99.9\%$
Sulfate (SO_4^{2-})	$\leq 0.03\%$	$\leq 0.05\%$	$\leq 0.10\%$	$\leq 0.005\%$
Chloride (Cl^-)	$\leq 0.002\%$	$\leq 0.005\%$	$\leq 0.008\%$	$\leq 0.001\%$
Water-Insoluble	$\leq 0.01\%$	$\leq 0.02\%$	$\leq 0.03\%$	$\leq 0.005\%$
Iron (Fe)	$\leq 0.003\%$	$\leq 0.005\%$	$\leq 0.008\%$	$\leq 0.001\%$
Sodium (Na)	$\leq 0.05\%$	$\leq 0.08\%$	$\leq 0.10\%$	$\leq 0.01\%$
Packaging	50kg / 250kg Drums	50kg / 250kg Drums	50kg / 250kg Drums	50kg / 100kg Drums

INDUSTRIAL APPLICATIONS

Metal Surface Treatment

Decorative & hard chrome plating — corrosion resistance, wear resistance & surface gloss for automotive, aerospace & industrial components.

Wood Preservation

CCA preservative fixation agent — $\text{Cr(VI)} \rightarrow \text{Cr(III)}$ locks copper & arsenic biocides in wood cellulose for 40–60 year service.

Pigment Manufacturing

Precursor for chrome yellow, molybdate orange & chrome oxide green — purity determines color strength & weather resistance.

Organic Synthesis

Jones oxidation, Collins reagent & catalytic variants — powerful oxidant for pharmaceutical intermediates & fine chemicals.