

ELEMENTIS

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Application Leaflet  
February 2014

*ELEMENTIS CHROMIUM -- PIGMENT GRADE  
CHROMIC OXIDE*



*Innovation • Compliance • High Performance*



[www.elementis-specialties-asia.com](http://www.elementis-specialties-asia.com)



## General data

Elementis Chromium produces the widest range of pigment grade chromic oxides on the market. The plant located in Wilmington, NC is world's largest chromium plant and chromic acid plant, the other plant in corpus christi, TX is producing chromic oxide pigments for local demands and exportation.

Compared to other green pigments, chromic oxide gives excellent light fastness, durability, stability and performance.

## Properties

Molecular Weight	152.01
CAS NO	1308-38-9
Pigment Classification	Pigment Green 17, C.I. 77288
Particle Shape	Spheroidal
Specific Gravity	5.1
Solubility in Water	Insoluble
Behavior on Heating	Completely stable. Melts at 2300 °C (4172 °F)

## Uses and product grades

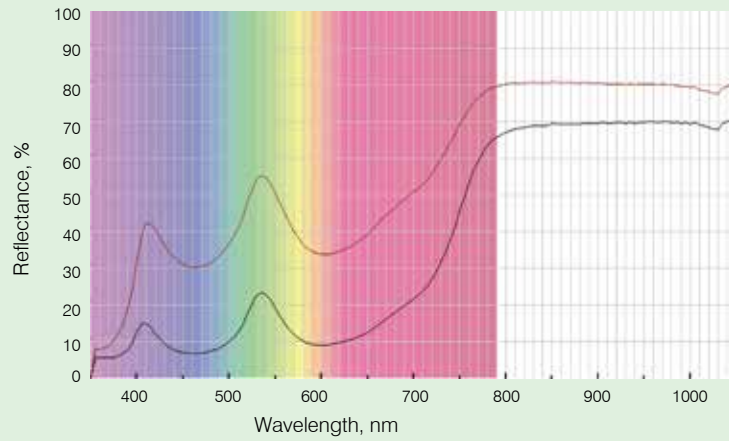
Pigment grade chromium oxides or pure chromic oxides as they are sometimes called, find a variety of applications in paints and coatings, enamels, concrete and other building products, floor coverings and in other uses where permanence of color is paramount. They are also used as catalysts where chemical composition and physical properties other than color are important.

Characteristics of pigment grade chromic oxides as compared with other green pigments are their superior stability and performance characteristics. They are unaffected by acids, alkalis, paint vehicles and solvents. Pigment grade chromic oxides also possess excellent durability against light, harsh weather and extremely high temperatures. In the ceramic industry, chromic oxides are mixed with metal oxides to produce pigments that vary in shade from black to yellow.

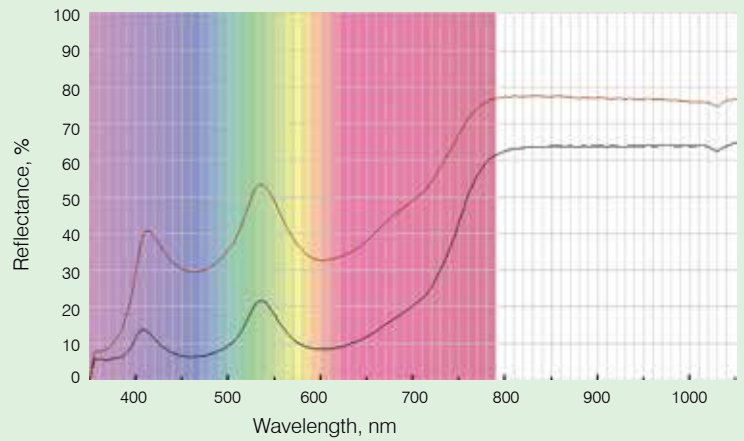
- G-4099** is a light yellowish-green powder and is also available as a higher purity material that meets FDA and CTFA specifications for cosmetic use.
- G-5099** is an intermediate green pigment specifically formulated to expand the range of pigment shades available. This grade is jet milled (micronized) in order to improve pigment characteristics.
- G-6099** is a bluish-green powder that is the darkest shade chromic oxide pigment available with strong tint strength. Also available as high purity material that meets FDA and CTFA specifications for cosmetic use.
- G-8599** is a dark green pigment with high infrared reflectance specifically formulated for use in camouflage coatings. It is easily dispersed in and compatible with the resin systems specified for camouflage coatings.



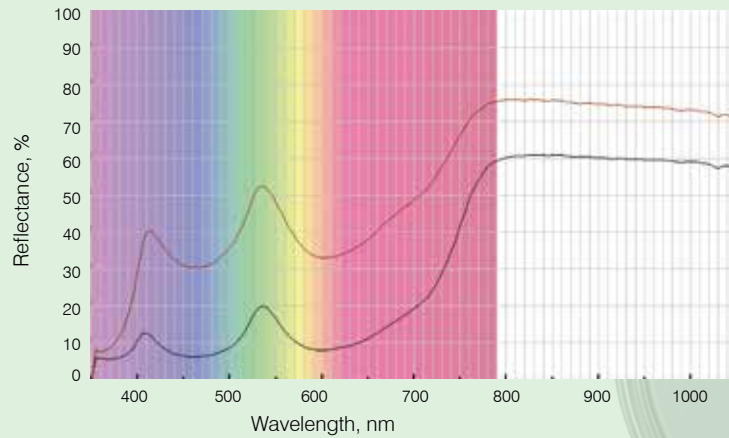
G4099 STANDARD MASS  
Mn/Mx : 0.00(350) / 71.24(1050)  
G4099 STANDARD TINT  
Mn/Mx : 0.00(350) / 81.23(1050)



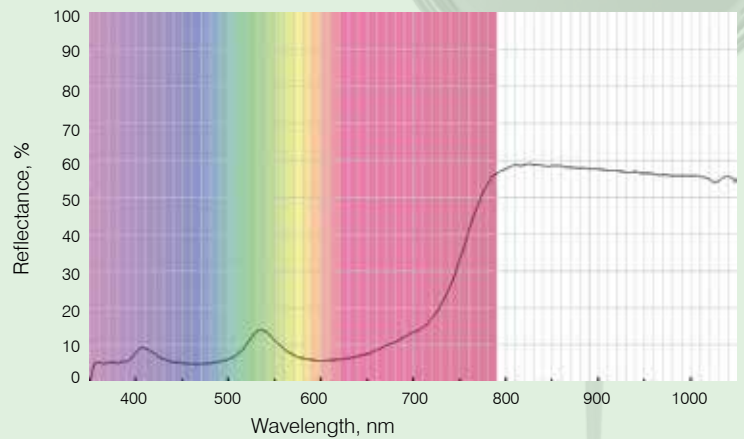
G5099 STANDARD MASS  
Mn/Mx : 0.00(350) / 65.41(1050)  
G5099 STANDARD TINT  
Mn/Mx : 0.00(350) / 77.69(825)



G6099 STANDARD MASS  
Mn/Mx : 0.00(350) / 60.99(850)  
G6099 STANDARD TINT  
Mn/Mx : 0.00(350) / 75.90(825)



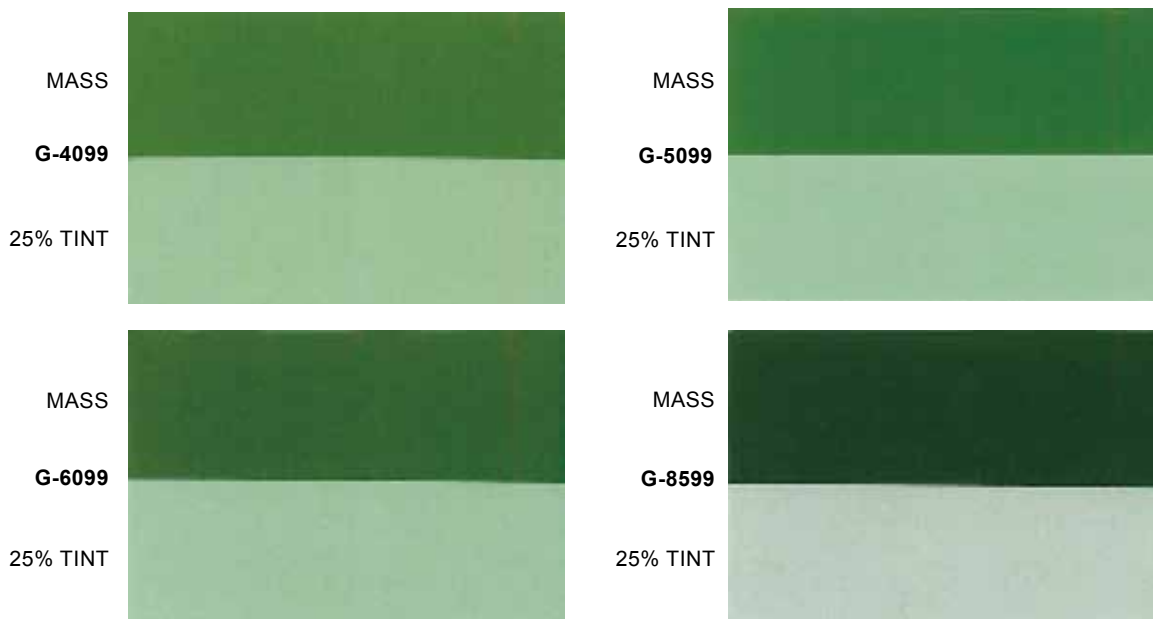
G8599 STANDARD MASS  
Mn/Mx : 0.00(350) / 58.92(825)



Chromic Oxide

Formula	$Cr_2O_3$	+325 Mesh Retention, %	0.10
Particle Shape	Spheroidal	Water Soluble, %	0.15
$Cr_2O_3$ Content, %	99	$H_2O$ , %	0.20
Specific Gravity	5.10	Colour Index	Pigment Green 17 (77288)

product	Average Particle Size ( $\mu$ )	Specific Surface Area ( $m^2/g$ )	Oil Absorption (g/100 g)	Tapped Density (g/cc)	pH
<b>Chromium Oxide Grades</b>					
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



A material safety data sheet and individual product specifications are available on request. Please contact your local Elementis Specialties representative for more information.

The information in this publication is intended to serve as guide but is not necessarily complete and is given without warranty. We recommend all users to determine the suitability of our products for their intended uses and caution them to comply with statutory obligations and to avoid infringing rights of third parties. We encourage users to contact us to discuss problems involving our products in order to facilitate their use.

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