

TECHNICAL BULLETIN

ALUMINUM OXIDE (Al₂O₃)

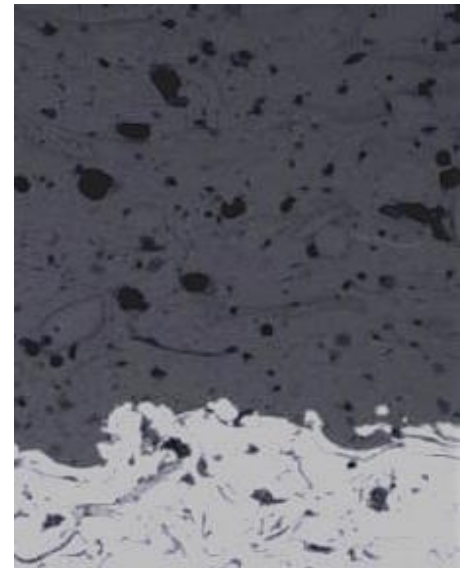
CT1112-1

OVERVIEW

CT1112-1 is an Aluminum Oxide (Al₂O₃) coating applied using the plasma spray process. The coating is high purity, very hard, well bonded and suitable for use where the dielectric and or wear resistant properties of (Al₂O₃) are required. CT1112-1 is effective in applications where the component is exposed to abrasive media over a wide temperature range. Use up to 2500° F.

TYPICAL PROPERTIES

Nominal Composition:	98.5% Al ₂ O ₃
Bond Strength:	2,000 - 3,000 psi
Coating Porosity:	1-2%
Coating Hardness:	Vickers 650-700
As-sprayed Surface Roughness:	<i>(depending on application parameters)</i> 200-600Ra
Dielectric Strength:	<i>(estimated)</i> ~300-400 V/.001"



FOR THE FOLLOWING APPLICATIONS

CT1112-1 is used for severe service conditions of abrasive wear, hard surface wear, and high temperature erosion. Typical components coated with this coating are electrical circuitry (dielectric), textile equipment (resistance to wear by fibers and threads), Hot Isostatic Press (HIP) cans (chemical inertness and resistance to elevated temperatures), and induction coils (resistance to elevated temperatures, wear resistance, dielectric).

FINISHING

Finish CT1112-1 by diamond grinding.
Finishes of 20-50 Ra are possible by grinding.

SPECIFICATIONS

CT1112-1 meets the following specifications:

Internal CTS specifications only

CTS-Midwest
5901 Creek Rd.
Cincinnati, OH 45242
(513) 793-0670 | F: (513) 793-4254

CTS-South
11766 NC Highway 210
Rocky Point, NC 28457
(910) 675-2909 | F: (910) 675-0806

CTS-East
80 Fadem Rd.
Springfield, NJ 07083
(973) 379-0003 | F: (973) 379-4066

CTS-Texas
4011 Chance Ln.
Rosharon, TX 77583
(281) 431-1629 | F: (281) 431-2179