

COORSTEK
Amazing Solutions.®



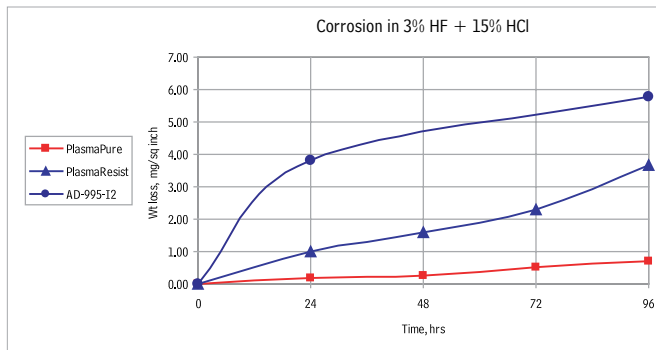
PLASMAPURE™ HIGH-PURITY ALUMINA

HIGH-PURITY, LOW-SODIUM ALUMINA – WITHOUT THE HIGH COST

Developed specifically for applications in semiconductor, electronic, and optical industries, CoorsTek® PlasmaPure™ Alumina offers exceptional purity, high etch resistance in corrosive chemistries, low-sodium content, and an extremely low dielectric loss tangent of < 0.00003.

Fabricated using conventional processing techniques, this material provides four times the corrosive resistance, six times less sodium content, and a significant cost advantage over competitive high-purity aluminas.

Standardized manufacturing methods offer greater flexibility with secondary processes like grinding, lapping, machining, laser machining, metallizing, electroplating, and more.



CoorsTek exclusive OpX manufacturing and quality system

Quick-Turn Prototyping and Manufacturing

Property	Units	Test	AD-995	PlasmaResist™ AD-996	PlasmaPure™ AD-998
Density	g/cc	ASTM-C 20-83	3.9	3.92	3.93
Color	*	*	Ivory	Ivory	Ivory
Flexural Strength (MOR), 20° C	Kpsi	ASTM-F417-78	55	56	58
Compressive Strength, 20° C	Kpsi	ASTM-C733-82	377	385	390
Tensile Strength, 25° C	Kpsi	ASTM Test #4	38	39	40
Fracture Toughness, K _{IC}	MPa m ^{1/2}	Notched Beam	4-5	4-5	4-5
Thermal Conductivity, 20° C	W/m K	ASTM-C408-82	30	30	30
CTE, 25-1000° C	ppm/ 25° C	ASTM-C372-81	8.2	8.2	8.2
Dielectric Constant, 6 GHz	25° C	ASTM-D2520-81	9.8	9.8	9.8
Q @ 6 GHz	25° C	ASTM-D2520-81	15,000	19,000	40,000
Loss Tangent, 6 GHz	25° C	ASTM-D2520-81	0.000067	0.000053	0.000025
Volume Resistivity, 25° C	log (ohm-cm)	ASTM-D1829-66	>14.0	>14.0	>14.0
Volume Resistivity, 300° C	log (ohm-cm)	ASTM-D1829-66	13.2	13.2	13.5
Volume Resistivity, 500° C	log (ohm-cm)	ASTM-D1829-66	10.3	10.3	11
Volume Resistivity, 700° C	log (ohm-cm)	ASTM-D1829-66	8.6	8.6	9
Volume Resistivity, 1000° C	log (ohm-cm)	ASTM-D1829-66	6.3	6.3	6.5

Note: The chart is intended to illustrate typical properties. Engineering data is representative. Property values vary somewhat with method of manufacture, size, and shape of part. Any suggested applications are not made as a representation or warranty that the material will ultimately be suitable for such applications. The customer is ultimately responsible for all design and material suitability decisions. Data contained herein is not to be construed as absolute and does not constitute a representation or warranty for which CoorsTek assumes legal responsibility. ANY WARRANTY OR REPRESENTATION FOR WHICH COORST^{TEK} IS RESPONSIBLE SHALL BE SUBJECT TO A SEPARATELY NEGOTIATED AGREEMENT.

To learn more, please contact our materials experts at **800.455.4050** or send an e-mail to **semi@coorstek.com**

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