

ALUMINA BONDED SILICON CARBIDE (ABSC-CXE)

When Aluminum Oxide and Silicon Carbide are fired in air the Aluminum Oxide reacts with the oxidized Silicon Carbide and forms Mullite. In essence it is a Mullite-bonded Silicon Carbide.

	Alumina Bonded Silicon Carbide
Material	ABSC
Density g/cc	3.0
Porosity	5.0%
Hardness 45N Scale	60-75
Hardness MOHS	9.3-9.7
Grain Size Avg.	Al ₂ O ₃ 3 mm SiC 50 mm – 500 mm
Flexural Strength (RT Kpsi)	20
Flexural Strength (1000°C) Kpsi	18
M.O.E. (10 ⁶ psi)	20
M.O.R. (psi)	6000
Poisson's ratio	.26
Melting Point or Decomposition Temp. (Max use temp in air)	1500°C
Chemical Formula – Major Phase	SiC – 70%
Chemical Formula – Minor Phase	Al ₂ O ₃ – 30%
Coefficient of Thermal Expansion in air (70-2250°F)	3.3 x 10 ⁻⁶ in/in/°F

Ceramic Systems, Inc.
2185 E. Wells Road, Caro, Michigan 48723-9561
PH: 989-673-7338 FX: 989-673-7349
ceramics@ceramicsystems.com

