

DATA SHEET

S-1

Ceramic Core Material

© 2015 Certech, Inc., a business within Morgan Advanced Materials

Description		Physical Properties	
General core type with an intermediate particle size distribution for Equiax casting.		Modulus of rupture (4-point), psi	2300
		Length shrinkage (mold-to-fired), %	0.9
		Chord shrinkage (mold-to-fired), %	1.1
		Thermal expansion coefficient (25 - 1000°C), ppm/°C	1.4
		Bulk density, g/cc	1.9
		Apparent density, g/cc	2.6
		Porosity, %	26
		Absorption, %	14
		Cristobalite content (after fire), %	1
		Cristobalite content (after 15 min. at 1390°C), %	3
		Leachability (30% boiling KOH, 30 g sample, 30 min.), %	100

Major Chemistry

Silica (SiO₂), % 70

Zircon (ZrSiO₄), % 30

Trace Element Analysis

Iron (Fe), ppm < 900

Bismuth (Bi), ppm < 1

Lead (Pb), ppm < 25

Silver (Ag), ppm < 25

Antimony (Sb), ppm < 25

Tin (Sn), ppm < 25

Zinc (Zn), ppm < 50

Core – Metal Reaction Compatibility

Most nickel based alloys.

Please note that all values quoted are based on test pieces and may vary according to component design. These values are not guaranteed in anyway whatsoever and should only be treated as indicative and for guidance only. Aug.12.2015