

DATA SHEET

G-3

Ceramic Core Material

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Description

General core type with an intermediate particle size distribution for Equiax castings. Formulated to be used for large land-based type cores that require good stability at elevated temperatures and for chunky airfoil cores up to 30 inches long, 8 inches wide, and 1 inch thick.

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

Physical Properties

Modulus of rupture (4-point), psi 1600

Length shrinkage (mold-to-fired), % 0.6

Chord shrinkage (mold-to-fired), % 0.8

Thermal expansion coefficient (25 - 1000°C), ppm/°C 1.5

Bulk density, g/cc 1.9

Apparent density, g/cc 2.6

Porosity, % 28

Absorption, % 15

Cristobalite content (after fire), % 2

Cristobalite content (after 15 min. at 1390°C), % 6

Leachability (30% boiling KOH, 30 g sample, 30 min), % 100

Core – Metal Reaction Compatibility

Most nickel based, DS and SX 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