Morgan Advanced Materials

CERTECH

DATA SHEET

P-32

Ceramic Core Material

Description

High silica core type with an intermediate particle size distribution and excellent high temperature stability. Used for DS and SX configurations where there are blind passages and core leachability is a concern.

Major Chemistry

Silica (SiO_2), %	93
Zircon ($ZrSiO_4$), %	3
Alumina (Al_2O_3), %	3
Other, %	1

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), %	1.3
Chord shrinkage (mold-to-fired), %	1.2
Thermal expansion coefficient (25 - 1000^{o}C), ppm/^{o}C	1.8
Bulk density, g/cc	1.6
Apparent density, g/cc	2.3
Porosity, %	31
Absorption, %	19
Cristobalite content (after fire), %	9
Cristobalite content (after 30 min. at 1530^{o}C), %	62
Leachability (30% boiling KOH, 30 g sample, 15 min.), %	100

Core – Metal Reaction Compatibility

Most 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