SILICON CARBIDE Technical Data Sheet

Nitride Bonded Silicon Carbide (NB Sic)

Calyco Cast NB Sic has excellent shape capabilities and can be easily cast into complex shapes with a high level of accuracy and a quality surface finish. Casting methods allow duplication of metal castings exactly.

GENERAL CHARACTERISTICS:

Wear Resistance:

Cast nitride bonded silicon carbide has excellent wear properties with sliding abrasion at low angle impingement and slurries.

Cast NB Sic often out performs rubber and hard metallic liners by factors ranging from 3:1 to 25:1, depending on application conditions.

Thermal Shock Resistance:

Very good shock resistance is attributed to Cast NB Sic high temperature strength, low thermal expansion and high thermal conductivity.

TYPICAL CHEMICAL ANALYSIS	
Sic	≥ 75%
Si3N4	≥ 23%
Fe2O3	0%

TYPICAL PHYSICAL PROPERTIES		
ITEM:	**UNIT:**	**DATA:**
Maximum use temperature	Celcius	1450
Bulk density	g/cm^3	2.75 -2.85
Porosity	%	≤ 13 %
Modulus of rupture @ 20°c	Mpa	170-180
Modulus of rupture @ 1200°c	MPa	180
Modulus of rupture @ 1350°c	Mpa	190
Thermal conductivity @ 1200°c	W/m.k	19.6
Thermal expansion resistance @ 1200°c		Excellent

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