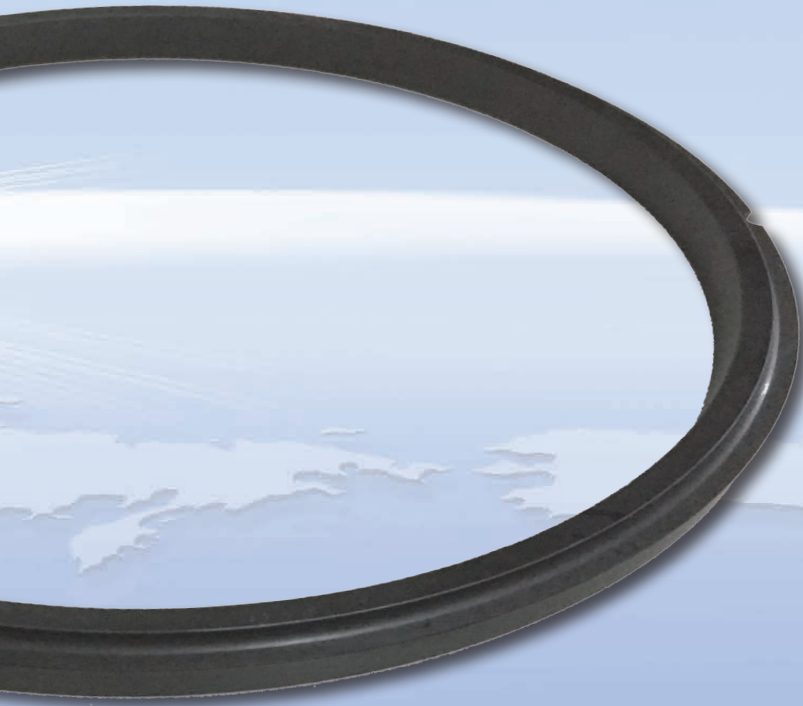
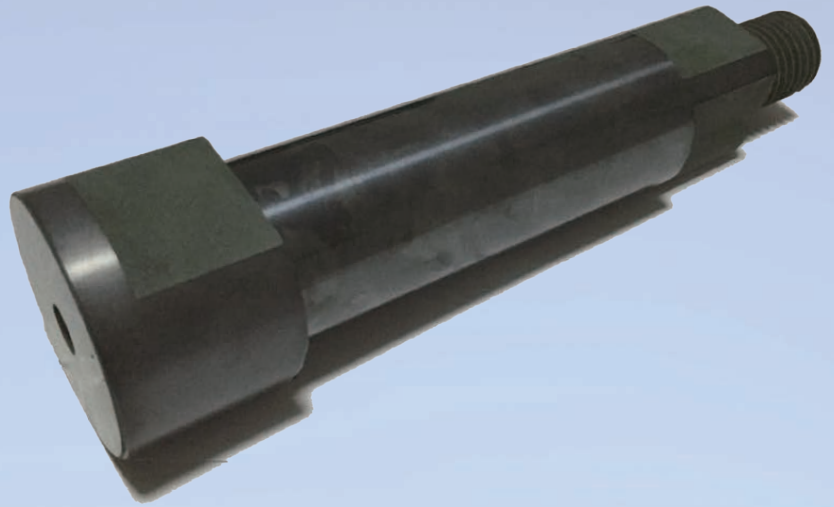


Material Data Sheet

SILICON CARBIDE

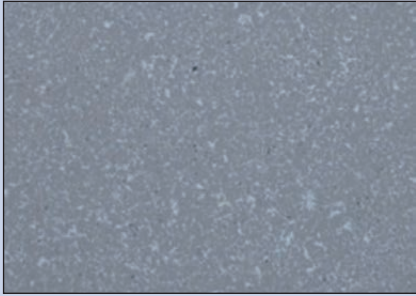


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A SEALS AND BEARINGS ENGINEERING COMPANY



DPMSIC-1

RBSiC(Reaction Bonded Silicon Carbide)



Feature:

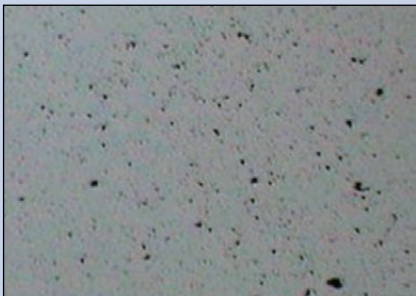
RBSiC is an engineering ceramic material which has good chemical resistance, good wear resistance and good thermal resistance.

Application:

Mechanical seal tribological faces, sliding bearings, thrust bearings, spray nozzles. It is an economic material which is possible to be used in most of the tribological conditions.

DPMSIC-2

SSiC(Sintered Silicon Carbide)



Feature:

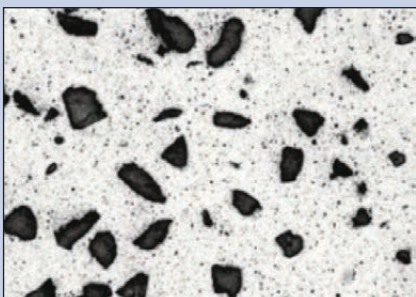
Compare to RBSiC, SSiC has higher density, Higher hardness, better chemical resistance, wear resistance and better mechanical property, which make its function more stable and reliable.

Application:

It can be applied in high temperature, highly chemical aggressive environment as the tribological material. It is a good material to handle abrasive media.

DPMSIC-3

SSiC+C(Sintered Silicon Carbide with free Graphite)



Feature:

SSiC+C is a kind of material which uses free Graphite content to improve the self-lubrication and thermo shock resistance of SSiC.

Application:

This material is ideal for HTC(high temperature corrosion) and high temperature abrasion applications, where impregnated Carbon Graphite is not effective.



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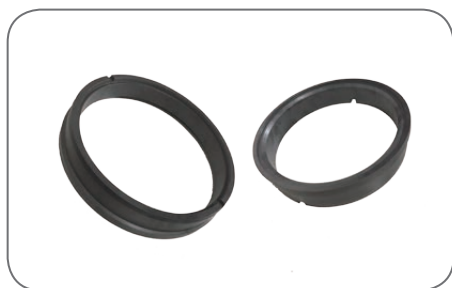
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Parameter	Unit	RBSIC	SSIC	SSIC+C
Density	g/cm ³	≥3.00	3.10-3.15	2.90-2.95
Porosity	%	≤0.3	<0.2	n/a
SiC content	%	>85	≥99	≥90
Si content	%	≤15	0.1	0.1
Thermal expansion rate	1/°C	4.5×10 ⁻⁶	4.3×10 ⁻⁶	4.3×10 ⁻⁶
Bending strength	MPa	≥350	450	200
Compressive strength	MPa	≥2200	3900	2200
Elasticity modulus	GPa	≥400	410	370
Application Temperature	°C	1300	1600	1100
Hardness	HRA	92.0	94.0	85.0
Heat conduction	W/(m·K)	161	146	142
Poisson's ratio		0.15	0.14	0.14



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