

CARBOREX® NO. 1 RF

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DESCRIPTION

CARBOREX® NO. 1 RF is a high purity refractory grain, manufactured from carefully selected quartz and coke, and is electrically furnaced under controlled conditions for desired purity and crystalline structure.

APPLICATIONS

CARBOREX® NO. 1 RF is used in the production of bonded refractory products requiring high thermal conductivity, chemical stability, hot strength, and thermal shock and abrasion resistant properties. Other uses include refractory cement, loose refractory grain, and electric heating elements.

TYPICAL CHEMICAL ANALYSIS

SiC	97.80%
SiO ₂	0.60%
Si	0.80%
Fe	0.20%
Al	0.30%
C	0.30%

TYPICAL PHYSICAL PROPERTIES

Crystallography	Alpha silicon carbide in a hexagonal crystal
Color	Black
Specific Gravity	3.20
Melting Point	Sublimes at 2700°C

REACTIVITY

Oxidation in air becomes severe at 1400° C with a 2% weight change after 3 hours at 1400° C. Stable in nitrogen. Reacts with chlorine at 900° C. Attacked by hydrogen at approximately 350° C. Resists acids.

TYPICAL THERMAL PROPERTIES

Thermal Conductivity	0.080 cal / sec · cm · °C at 600° C; 0.061 at 800° C; 0.051 at 1000° C
Coefficient of Linear Expansion	4.36 x 10 ⁻⁶ per °C: 25 - 500° C 5.12 x 10 ⁻⁶ per °C: 25 - 1000° C 5.48 x 10 ⁻⁶ per °C: 25 - 1500° C 5.77 x 10 ⁻⁶ per °C: 25 - 2000° C 5.94 x 10 ⁻⁶ per °C: 25 - 2500° C
Specific Heat (cal / g · °C)	0.10 at 15° C; 0.27 at 700° C; 0.33 at 1318° C

SPLIT SIZES AVAILABLE

4/8, 6/10, 8/16, 16/30, 30/50, 50/100, 6/F, 10/F, 50/F, 100/F, 200/F, 280/F, 800/F

Other Sizes Available Upon Request

SINGLE GRIT SIZES AVAILABLE

Macro: 6, 8, 10, 12, 14, 16, 20, 24, 30, 36, 46, 54, 60, 70, 80, 90, 100, 120, 150, 180, 220, 240

Micro: 280, 300, 360, 400, 500, 600, 800, 1000, 1200, F, FF, and FFF

This product information is NOT a specification. It is offered in good faith only as a general description of the product. **Washington Mills makes no warranty of merchantability or of fitness for any particular purpose.** The product chemistry and other characteristics may vary or contain trace elements not specifically listed. If your intended application for this product is so critical that relatively minor variations in chemistry or physical properties could cause problems or damage to your process or product, please contact our office for further assistance.