INDUSTRIES 3R

Danville Office
55, route 116 Ouest
Danville (Québec) Canada
J0A 1A0

Phone: 819-839-2793
Fax: 819-839-2797
Toll-free: 800-567-2728
E-mail: info@industries3r.com

CERAMIC

RSLE-501

Description

This silica reinforced composite is in a cylindrical form. It has outstanding resistance due to its high endurance. Since it has a very low coefficient of expansion, this material offers superior resistance to thermal shock in an oxidized atmosphere.

Applications

The RSLE-501 was designed for use as durable insulators in induction heat treating applications. It is also used in zones where temperatures may rapidly.

Specifications

Properties & characteristics	
Temperature	1 200°C (2 192°F)
Nominal composition, wt % Al2 O3	65
Thermal Expansion Coeff. Room Temp. to 800°C (1472°F)	0.3 x 10e6/°C
Nominal composition, wt % SiO2	99.7
Nominal composition, wt % Other oxides	0.3
Nominal composition, wt % Organics	0
Nominal composition, wt % Density, g/cc (pcf)	2.1 (90)

Nominal composition, wt % Porosity, %	31
Nominal composition, wt % Color	White
Nominal composition, wt % Hardness, Durometer «D»	87
Nominal composition, wt % Charpy impact strength, ft-lb	0.8
Compressive Strength**, Mpa (psi) At 2.7% consolidation	48 (7000)
Compressive Strength**, Mpa (psi) Modulus of rupture**, Mpa (psi)	30 (4300)
Thermal Conductivity** ASTM C-1113 - W/m°K (BT/hr ft² °F/in) 200°C (392°F)	0.55 (3.8)
Thermal Conductivity** ASTM C-1113 - W/m°K (BT/hr ft² °F/in) 400°C (752°F)	0.64 (4.4)
Thermal Conductivity** ASTM C-1113 - W/m°K (BT/hr ft² °F/in) 600°C (1112°F)	0.61 (4.2)
Thermal Conductivity** ASTM C-1113 - W/m°K (BT/hr ft² °F/in) 800°C (1472°F)	0.67 (4.6)
Thermal Conductivity** ASTM C-1113 - W/m°K (BT/hr ft² °F/in) 1000°C (1832°F)	0.75 (5.2)
Thermal Conductivity** ASTM C-1113 - W/m°K (BT/hr ft² °F/in) Volume Resistivity, ohm-cm ASTM D-257-93	7.5 x 10?
Dielectrical Strength, volts/mil ASTM D-149-95	43
Linear shrinkage, % *** 24 hrs to 800°C (1472°F) Length	0.1
Linear shrinkage, % *** 24 hrs to 800°C (1472°F) Width	0.1
Linear shrinkage, % *** 24 hrs to 800°C (1472°F) Thickness	0
Linear shrinkage, % *** 24 hrs to 1100°C (2012°F) Length	4.9
Linear shrinkage, % *** 24 hrs to 1100°C (2012°F) Width	4.9
Linear shrinkage, % *** 24 hrs to 1100°C (2012°F) Thickness	7.9 ** Parallel to thickness*** Perpendicular to thickness