

ElectroCast[™] 1125 SiC

TECHNICAL DATA SHEET

ElectroCast[™] 1125 SIC is a fused alumina, silicon-carbide fortified, no-cement castable designed to be installed by the vibration/cast process.

- Based on Reno's propriety Electro Chemical bond system featuring an electrolyte for ultimate performance.
- Rapid dry out capability while still retaining very low porosity.
- Excellent material for applications in cement plant cyclones, ducts, coolers, and offtakes.
- Excellent resistance to alkalai vapors, sulfur compounds, and chlorides.
- Excellent refractory for large scale installations.
- Low permeability to reduce vapor penetration into the refractory structure.
- The low porosity and small pore sizes creates dry hot face surfaces which greatly reduce dust buildup in ducts.

| Service Temperature: | 3000°F |
|------------------------------|------------------------|
| Electrolyte Type: | E11 |
| Addition Quantity: | 4.2-4.8% (wt.) |
| Wt. Required for Estimating: | 189 lb/ft ³ |
| Storage Life: | 6 months |

TYPICAL CHEMICAL ANALYSIS (Calcined Basis)

| AI_2O_3 | SiO ₂ | TiO ₂ | SiC + C |
|-----------|------------------|------------------|---------|
| 67 | 6.5 | 1.2 | 25 |

TYPICAL PHYSICAL PROPERTIES *reducing atmosphere

| Prefire | Modulus of | Cold Crushing | Density | Porosity | Linear | Permeability | Thermal K |
|-------------------|------------|---------------|---------|----------|--------|--------------|------------------------------|
| Temperature | Rupture | Strength | (pcf) | (%) | Change | (mdarcys) | (Btu/in/ft ² /hr) |
| (°F) | (psi) | (psi) | | | (%) | | |
| 250 | 688 | 3,792 | 187.4 | 11.0 | 0.04 | 0.47 | 16.2 |
| 750 | 968 | 4,569 | 188.1 | 12.3 | 0.18 | 0.84 | 18.8 |
| 1000 | 869 | 4,579 | 187.3 | 10.6 | 0.12 | 1.0 | 19.9 |
| 1500 | 1,789 | 13,480 | 189.4 | 12.2 | 0.22 | 5.7 | 21.1 |
| 2000 | 4,016 | 14,683 | 188.0 | 10.7 | 0.11 | 20.2 | 21.4 |
| 2200 | 3,211 | 14,681 | 187.8 | 11.0 | 0.11 | 27.9 | 21.6 |
| 2500 [*] | 2,095 | 13,406 | 188.7 | 10.6 | 0.18 | 24.5 | 21.9 |
| 2800 [*] | 1,894 | 14,962 | 188.3 | 11.1 | -0.11 | 32.6 | 22.4 |

Thermal Expansion Coefficient: Thermal Shock Loss (after 2000^oF):

Abrasion Loss After 1500^oF: Abrasion Loss After 2500^oF: Abrasion Loss After 2800^oF: 2.88E-6 in/in/°F (ASTM C832) 57.4% MOR Loss(ASTM C-1171)

3.2 cc (ASTM C704) 4.2 cc (ASTM C704) 1.3 cc (ASTM C704)

19-022C

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The data presented represents typical average results obtained by testing under ASTM or other acceptable procedures as required. They are subject to normal variations and should not be used for specification purposes.

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