RENO REFRACTORIES, INC

ElectroShot™ Sil 1199

TECHNICAL DATA SHEET

ElectroShot™ Sil 1199 is a fused silica based, no cement castable based on Reno's Electro-Chemical bond system. This product is designed to be placed by the shotcrete process..

- Based on Reno's proprietary Electro-Chemical bond system for maximum performance.
- Low porosity and permeability further reduces penetration and reaction with vapors.
- Recommended for use in applications where the presence of chlorine, sulfur compounds, and alkali vapors are present. Aluminum furnaces, above the metal line. Cement plant preheater stages 2,3, and 4, and riser duct can be lined with Sil 1199. Zinc recycling dust catcher roof and walls.
- Excellent Thermal Shock resistance. Best for cyclical applications such as wood burning systems, boilers, hoods or any uses where rapid temperature swings are present. Single component lining design allows for rapid installation with reduced labor costs.
- Provides unique physical properties that allow the refractory to excel against dirty fuels.

Service Temperature:	2900ºF
Electrolyte Type:	E11
Addition Quantity:	7-9%
Wt. Required for Estimating	111 lb/ft^3
Storage Life:	6 months

TYPICAL CHEMICAL ANALYSIS (Calcined Basis)

Al_2O_3	SiO_2	Fe_2O_3	CaO	MgO
0.5	99	0.1	0.1	0.1

TYPICAL PHYSICAL PROPERTIES

Prefire Temperature (ºF)	Modulus of Rupture (psi)	Cold Crushing Strength (psi)	Density (pcf)	Porosity (%)	Linear Change (%)	Permeability (mDarcys)	Thermal k (Btu/ft^2/in/hr)	Surface Area (m^2/g)
250	1,041	2,314	111.6	17.4	0.00	1.5	9.0	4.23
750	1,24	2,446	110.6	17.9	0.43	5.8	9.2	5.28
1000	805	4,136	110.9	17.9	0.19	7.9	9.4	7.75
1500	941	4,917	110.5	18.2	0.15	16.1	9.7	6.54
2000	620	5,313	110.9	18.3	-0.18	25.4	9.9	5.94
2200	333	4,432	110.3	17.5	-0.43	34.7	10.1	5.16
2500	455	4,777	111.2	19.5	-0.36	94.5	10.2	6.84
2650	464	5,321	114.7	17.9	-0.48	123.3	10.4	5.75
2800	557	4,441	113.2	18.6	-0.72	133.7	10.5	2.81

Thermal Expansion Coefficient:	0.33E^{-6} in/in/ºF(ASTM C832)
Thermal Cycle Loss (after 2000ºF):	31.4% MOR Loss (ASTM C-1171)
Hot MOR at 2750ºF:	1364 psi (ASTM C583)
Abrasion Loss After 1500ºF:	12.1 cc (ASTM C704)
Abrasion Loss After 2500ºF:	9.0 cc (ASTM C704)

PACKAGING: 55 lb. Bags, 72 per Pallet (3960 lbs.) 1500 lb. Bags, 2 per Pallet (3000 lbs.) 2000 lb. Bags, 2 per Pallet (4000 lbs.)

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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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