Foundry Service & Supplies, Inc.

FUSED SILICA
HOT PRESS PLATENS
CASTABLE CERAMICS
FIRED SHAPES
AEROSPACE TOOLING

11808 Burke Street, Santa Fe Springs, CA 90670
Phone: 562-945-6511
Fax: 562-696-1633

HI-TEMP INSULATIONS
CALCIUM SILICATE BOARDS
MILLBOARD AND BLANKET
PAPERS AND CEMENTS
CUTTING AND FABRICATING

MIZZOU® CASTABLE

Description: MIZZOU CASTABLE is a high alumina material for use to 3000°F. It has excellent resistance to numerous different slags, resists vitrification, and actually shows expansion rather than shrinkage at high temperatures. MIZZOU CASTABLE also has superior resistance to spalling and high strength throughout its entire temperature range.

Typical applications are combustion chambers, low temperature incinerators, air heaters, boilers, burner blocks, aluminum furnace upper sidewalls and roof regions, forge furnaces, and iron foundry ladles.

MIZZOU CASTABLE Plus is the fast fire version of MIZZOU CASTABLE.

Physical Properties: (Typical)	English Units		SI Units
Maximum Temperature	3000°F		1650°C
	lb/ft^3		g/cm^3
Material Required	139		2.23
Bulk Density			
After 220°F (105°C)	143		2.29
After 1500°F (815°C)	139		2.23
Water Required		Approximately	
Weight % Dry Solids		9.4%	
Working Time		20 Minutes	
Permanent Linear Change			
After 220°F (105°C)		-0.1%	
After 1500°F (815°C)		-0.2%	
After 2000°F (1095°C)		-0.2%	
After 2500°F (1370°C)		+0.9%	
After 2900°F (1595°C)		+2.8%	
Modulus of Rupture	lb/in^2		MPa
After 220°F (105°C)	1075		7.4
After 1500°F (815°C)	700		4.9
After 2000°F (1095°C)	475		3.3
After 2500°F (1370°C)	950		6.6
Cold Crushing Strength			
After 220°F (105°C)	5000		34.2
After 1500°F (815°C)	3000		20.7
After 2000°F (1095°C)	2700		18.6
After 2500°F (1370°C)	3600		24.9
Particle Size			
Retained on 4 Mesh Screen		Less than 5%	

(Continued)

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MIZZOU® CASTABLE (Continued)

Thermal Conductivity At a Mean Temperature of	Btu·in/hr·ft^2·°F	W/m·°C
400°F (205°C)	7.8	1.12
800°F (425°C)	7.7	1.11
1200°F (650°C)	7.6	1.10
1600°F (870°C)	7.5	1.08
2000°F (1095°C)	7.4	1.07
2400°F (1315°C)	7.4	1.07

NOTE: MIZZOU CASTABLE Plus will typically show 1-3 lb/ft^3 lower density and up to 15% lower strength values.

Chemical Analysis:
(Calcined Basis)

Silica	(SiO_2)	32.5%
Alumina	(Al_2O_3)	60.0%
Iron Oxide	(Fe_2O_3)	1.5%
Titania	(TiO_2)	2.5%
Lime	(CaO)	2.5%
Magnesia	(MgO)	0.4%
Alkalies	(Na_2O & K_2O)	0.6%

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. Accordingly, test data cannot be taken as establishing maximum or minimum specifications. ASTM test procedures used when applicable.

07/07/97 Dev.