



Product Data

1/05: 5975
Plus: 5976

MIZZOU® CASTABLE

<u>Physical Properties: (Typical)</u>	<u>English Units</u>	<u>SI Units</u>
Maximum Temperature	3000°F	1650°C
Material Required	$\frac{\text{lb}}{\text{ft}^3}$ 141	$\frac{\text{g}}{\text{cm}^3}$ 2.26
Bulk Density		
After 220°F (105°C)	145	2.32
After 1500°F (815°C)	141	2.26
Water Required		<u>Approximately</u>
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	$\frac{\text{lb}}{\text{in}^2}$	<u>MPa</u>
After 220°F (105°C)	1200	8.3
After 1500°F (815°C)	800	5.5
After 2000°F (1095°C)	600	4.1
After 2500°F (1370°C)	1100	7.6
Cold Crushing Strength		
After 220°F (105°C)	5500	37.9
After 1500°F (815°C)	3500	24.1
After 2000°F (1095°C)	3000	20.7
After 2500°F (1370°C)	4000	27.6
Particle Size		
Retained on 4 Mesh Screen		Less than 5%
Thermal Conductivity		
At a Mean Temperature of	$\frac{\text{Btu}\cdot\text{in}}{\text{hr}\cdot\text{ft}^2\cdot^\circ\text{F}}$	$\frac{\text{W}}{\text{m}\cdot^\circ\text{C}}$
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/ft³ lower density and up to 15% lower strength values.

(Continued)



Product Data

MIZZOU[®] CASTABLE (Continued)

Chemical Analysis:
(Calcined Basis)

Silica	(SiO ₂)	32.4%
Alumina	(Al ₂ O ₃)	60.3%
Iron Oxide	(Fe ₂ O ₃)	1.4%
Titania	(TiO ₂)	2.3%
Lime	(CaO)	2.6%
Magnesia	(MgO)	0.4%
Alkalies	(Na ₂ O & K ₂ O)	0.6%

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.

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.

01/13/05 Dev.