

**Super Demon Air Set Wet**

Product Number 17001

Date 2/10/2014

**Product Description**

A wet, air setting, super duty refractory mortar. Coverage 350-400lb (160-180 kg) per 1000 standard firebrick. May be used for hot spot/ fill injection with a suitable grout pump.

**Service limit -** 3000°F 1,648 °C

**Std. package** 50# / 22.7 kg Pail

**Density to place** pcf 0 kg/m<sup>3</sup>

**Water range per std. package:**

**Density in service** 120 pcf 1,922 kg/m<sup>3</sup>

**Casting** to qts 0.0 to 0.0 l

**Min time before firing** none

**Pumping** to qts 0.0 to 0.0 l

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	47.2	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	48.4	Alk.	2.3
Fe <sub>2</sub> O <sub>3</sub>	0.6	MgO	0.0
CaO		SiC	
TiO <sub>2</sub>	1.3	ZrO <sub>2</sub>	
		Other	

**Thermal Conductivity**

	btu*in/hr*ff <sup>2</sup> *°F	w/m°C
500F / 260C	6.0	0.86
1000F / 540C	6.2	0.89
1500F / 815C	6.4	0.92
2000F / 1090C	6.8	0.97

**Abrasion Loss**

per ASTM C 704  
after 1500 F

cc

**Coefficient of Thermal Expansion**  
(reversible)

2.9 x 10<sup>-6</sup> in/in F

5.2 x 10<sup>-6</sup> m/m C

Temperature per <u>ASTM C113 / C865</u>	Linear Change per <u>ASTM C113 / C179</u>	Cold MOR		CCS		Hot MOR	
		per ASTM C133 <u>psi</u>	<u>MPa</u>	per ASTM C133 <u>psi</u>	<u>MPa</u>	per ASTM C583 <u>psi</u>	<u>MPa</u>
230 F / 110 C	-1.2%	1800	12.4		0		
1500 F / 815 C	-1.7%	1950	13.4		0		0.0
			0.0		0		0.0
			0.0		0		0.0
			0.0		0		0.0

**Other Data**

Bonding Strength ASTM C-198 230F/ 110C - 650psi (4.5 MPa) 2910F/1600C -1250psi (8.6 MPa)

Note: Thermal conductivity data is an estimate based on chemistry, mineralogy and density. Density & MOR values obtained on long term air dried samples.

**Heat Up Guide**

**ASTM Class**

C 1655 Super Duty

**Note:**

All data are averaged results of ASTM tests (where applicable).

Reasonable variations in data can be expected. Data is not to be used for specification purposes. Product data is periodically updated to reflect product / raw material / process / testing changes. Please consult your Plico representative to make sure you have the most current data.

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