



# Plibrico Company, LLC

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# Technical Data Sheet Plicast HyMOR TSR Plus KK

Product # 14102

Available Internationally As: Plico Castable LC TSR Plus KK

### Product Description:

A fused silica-mullite, thermal shock resistant, high strength, low cement castable. May be cast, pumped or shotcreted (see other data below).

**Standard Packaging:** 50 # / 23 kg Bag

**Shelf Life:** 6 months

**Service Limit:** 2500 °F 1370 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 127 pcf 2035 kg/m<sup>3</sup>

**Bulk Density - To Place:** 127 pcf 2035 kg/m<sup>3</sup>

**Minimum Time To Firing:** 16 hr

**Abrasion Loss after 1500°F / 815°C**  
 per ASTM C704

9 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	31.1	Alk	0.2	MgO	0.1
SiO <sub>2</sub>	65.5	TiO <sub>2</sub>	0.3	ZrO <sub>2</sub>	
CaO	2.5	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	0.3	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	6.4	1.5	1.5
	max	7.2	1.7	1.6
Pumping	min	6.8	1.6	1.5
	max	8.7	2.1	2.0

**Coefficient of Thermal Expansion (reversible):**

0.7 x 10<sup>-6</sup> in/in/°F / 1.3 x 10<sup>-6</sup> mm/mm/°C

Thermal Conductivity	btu*in/hr*ft <sup>2</sup> *°F	W/m°C
500°F / 260°C	6.1	0.9
1000°F / 540°C	6.4	0.9
1500°F / 815°C	7.1	1.0
2000°F / 1090°C	8.1	1.2

Temperature		Linear Change% per ASTM C113	CCS per ASTM C133		Cold MOR per ASTM C133		Hot MOR per ASTM C583	
°F	°C		psi	MPa	psi	MPa	psi	MPa
230	110	0.0	8500	59.0	1600	11.0		
1000	540	-0.1			1600	11.0	2000	13.8
1500	820	-0.2	8500	59.0	1650	11.4	2300	15.9
2000	1090	-0.4			1400	9.7	2000	13.8
2300	1260	-0.3			1100	7.6	1500	10.3

Other Data: Shotcrete Data: Density in service - 122pcf, CCS 1800F- 6000psi, CMOR 1800F - 1300 psi, Abr loss 1800F - 14 cc

Release Date: 1 Aug 2019

Heat Up Guide: Schedule C or C-Linear

ASTM Class: C 401 Class C Low Cement Castable

Refractory material should be stored in a cool, dry environment.

**Note:** All data are averaged results of ASTM tests (where applicable) on laboratory specimens. 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 and/or testing changes. Please consult your Plibrico representative to make sure you have the most current data.