

Plico Castable A-T 40

Product Number 14142

Date 2/10/2014

Product Description
A high alumina, high purity, high strength, non-wetting refractory castable.

Typical Aluminum Applications
Aluminum contact applications where silica contamination is critical.

Service limit - 3400°F 1871 °C **Std. package** 55 # / 25 kg Bag
Al contact limit - 1700 °F 926°C **Water range per std. package:**
Density to place 165 pcf 2,643 kg/m³ **Casting** 2.2 to 2.6 qts 2.1 to 2.5 l
Density in service 165 pcf 2,643 kg/m³ **Pumping** to qts 0.0 to 0.0 l
Min time before firing 24 hr

Chemistry % (calcined)

Al ₂ O ₃	94.5	P ₂ O ₅	
SiO ₂	0.1	Alk.	0.5
Fe ₂ O ₃	0.1	MgO	
CaO	4.9	SiC	
TiO ₂		ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ft ² *°F	w/m°C
500F / 260C	18.0	2.59
1000F / 540C	14.5	2.08
1500F / 815C	13.0	1.87
2000F / 1090C	13.1	1.88

Abrasion Loss
per ASTM C 704
after 1500 F

12 cc

Coefficient of Thermal Expansion
(reversible)
5 x 10⁻⁶ in/in F
9 x 10⁻⁶ 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	-0.1%	1000	6.9	6500	45		
1000 F / 540 C	-0.2%	950	6.5		0		0.0
1500 F / 815 C	-0.2%	900	6.2	4500	31	1100	7.6
			0.0		0		0.0
			0.0		0		0.0

Other Data

Heat Up Guide
Schedule B

ASTM Class
C 401 Class G

Regular Castable

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

Plico Refractories are manufactured by Plibrico Company LLC, USA.