



**Plibrico Company, LLC**  
**Plico Refractories**

1935 Techny Road - Unit 16  
 Northbrook, IL 60062  
 Phone: 312-337-9000 Fax: 312-337-9003  
 www.plico-refractories.com.com

**Technical Data Sheet**

**Plico Castable Fast Track 40-25**

Product # 14293

Product Description

n intermediate duty, high strength, refractory castable which may be dried out / heated on an accelerated schedule and minimum cure time. Note: Cure times less than 12 hrs will result in lower strengths (see other data).

Service Limit      Bulk Density:    In Service    To Place

|         |                   |      |      |
|---------|-------------------|------|------|
| 2500 °F | pcf               | 122  | 122  |
| 1370°C  | kg/m <sup>3</sup> | 1954 | 1954 |

Standard Packaging

55 # / 25 kg Bag

Min. Time Before Firing: 6 hr

Chemistry (calcined) - %

|                                |      |                               |     |                  |     |
|--------------------------------|------|-------------------------------|-----|------------------|-----|
| Al <sub>2</sub> O <sub>3</sub> | 42.1 | Alk                           | 0.6 | MgO              | 0.1 |
| SiO <sub>2</sub>               | 45.3 | TiO <sub>2</sub>              | 2.2 | ZrO <sub>2</sub> |     |
| CaO                            | 7.5  | P <sub>2</sub> O <sub>5</sub> |     | Other            |     |
| Fe <sub>2</sub> O <sub>3</sub> | 2.1  | SiC                           |     |                  |     |

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

Water Range per Std. Package

|          | <u>%</u> | <u>gts</u> | <u>liters</u> |
|----------|----------|------------|---------------|
| Vib Cast |          |            |               |
| min      |          |            |               |
| max      |          |            |               |
| Casting  |          |            |               |
| min      | 12.0     | 3.2        | 3.0           |
| max      | 13.3     | 3.5        | 3.3           |
| Pumping  |          |            |               |
| min      |          |            |               |
| max      |          |            |               |

Thermal Conductivity

|                 | <u>btu*in/hr*ft<sup>2</sup>*°F</u> | <u>w/m<sup>2</sup>C</u> |
|-----------------|------------------------------------|-------------------------|
| 500°F / 260°C   | 5.6                                | 0.8                     |
| 1000°F / 540°C  | 5.7                                | 0.8                     |
| 1500°F / 815°C  | 5.9                                | 0.8                     |
| 2000°F / 1090°C | 6.3                                | 0.9                     |

Coefficient of Thermal Expansion (reversible):

2.9 x 10<sup>-6</sup> in/in/°F / 5.2 x 10<sup>-6</sup> mm/mm°C

| <u>Temperature</u> |           | <u>Linear Change %</u><br>per ASTM C113 | <u>CCS</u><br>per ASTM C133 |            | <u>Cold MOR</u><br>per ASTM C133 |            | <u>Hot MOR</u><br>per ASTM C583 |            |
|--------------------|-----------|---|-----------------------------|------------|----------------------------------|------------|---------------------------------|------------|
| <u>°F</u>          | <u>°C</u> |   | <u>psi</u>                  | <u>MPa</u> | <u>psi</u>                       | <u>MPa</u> | <u>psi</u>                      | <u>MPa</u> |
| 230                | 110       | -0.1                                    | 4500                        | 31.0       | 800                              | 5.5        |                                 |            |
| 1500               | 820       | -0.3                                    | 4000                        | 28.0       | 400                              | 2.8        | 750                             | 5.2        |
| 2000               | 1090      | -0.4                                    |                             |            | 450                              | 3.1        | 650                             | 4.5        |
| 2500               | 1370      | 0.3                                     |                             |            | 1400                             | 9.7        |                                 |            |

**Other data**  
 Cured CCS - @6hr - 2200psi, @18hr - 3500psi

Heat Up Guide: Schedule FT

ASTM Class C 401 Class C 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 and/or testing changes. Please consult your Plibrico representative to make sure you have the most current data.