



Plibrico Company, LLC

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Technical Data Sheet

Exo-Set Uno A

Product # 17436

Available Internationally As:

Exo-set Uno A

Product Description:

An one component, rapid hardening, chemically bonded, high purity alumina based refractory castable. Exhibits excellent bonding adherence to old refractory - hot or cold. Non wetting to aluminum.

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 6 months

Service Limit: 2500 °F 1370 °C

Contact Limit: N/A °F N/A °C

Bulk Density - In Service: 172 pcf 2755 kg/m³

Bulk Density - To Place: 172 pcf 2755 kg/m³

Minimum Time To Firing: 0 hr

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

10 cc

Chemistry (calcined) %

| | | | | | |
|--------------------------------|------|-------------------------------|-----|------------------|-----|
| Al ₂ O ₃ | 85.4 | Alk | | MgO | |
| SiO ₂ | 2.7 | TiO ₂ | | ZrO ₂ | |
| CaO | | P ₂ O ₅ | 4.4 | Other | 7.4 |
| Fe ₂ O ₃ | | SiC | | | |

| Water Range Per Standard Package | | % | Quarts | Liters |
|----------------------------------|-----|-----|--------|--------|
| Vib Casting | min | | | |
| | max | | | |
| Casting | min | 5.6 | 1.5 | 1.4 |
| | max | 6.4 | 1.7 | 1.6 |
| Pumping | min | 6.4 | 1.7 | 1.6 |
| | max | 7.2 | 1.9 | 1.8 |

Coefficient of Thermal Expansion (reversible):

4.8 x 10⁻⁶ in/in/°F / 8.6 x 10⁻⁶ mm/mm/°C

| Thermal Conductivity | btu*in/hr*ft ² *°F | W/m°C |
|----------------------|-------------------------------|-------|
| 500°F / 260°C | 13.7 | 2.0 |
| 1000°F / 540°C | 13.4 | 1.9 |
| 1500°F / 815°C | 12.8 | 1.8 |
| 2000°F / 1090°C | 13.0 | 1.9 |

| 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 | -0.1 | 5000 | 34.0 | 1100 | 7.6 | | |
| 1500 | 820 | -0.3 | 4000 | 28.0 | 1200 | 8.3 | 1700 | 11.7 |
| 1800 | 980 | -0.3 | | | 1500 | 10.3 | 1100 | 7.6 |
| 2000 | 1090 | -0.4 | | | 2000 | 13.8 | 350 | 2.4 |
| 2500 | 1370 | -1.1 | | | 2800 | 19.3 | | |

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule D

ASTM Class:

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.