RICHO Refractory
FIRE BRICK & INSULATING BRICK PRODUCT

TECHNICAL DATA SHEET

RCH-17 | CONVENTIONAL DENSE REFRACTORY CASTABLE

PRODUCT CODE	PRODUCT TYPE	REFRACTORINESS
RCH-17	Dense Castable (Conventional)	1450 °C

1. PRODUCT DESCRIPTION

RCH-17 is a conventional dense refractory castable based on pyrophyllite aggregate and calcium aluminate cement, for continuous service temperatures up to 1300 °C. It is straightforward to install by casting and vibration and is a general-purpose choice for furnace, boiler and incinerator zones where severe chemical attack or heavy abrasion is not expected.

2. CHEMICAL ANALYSIS (CALCULATED)

Chemical Composition	Calculated Range (%)
Al_2O_3 — Alumina	27.5 - 31.0
SiO_2 — Silica	61.0 - 64.5
Fe_2O_3 — Iron Oxide	0.3 - 1.0
CaO — Calcium Oxide	6.5 - 7.5

Calculated on a fired basis; indicative values, not contractual or batch-specific limits.

3. PHYSICAL PROPERTIES (TYPICAL)

Property	Test Condition	Typical Value
Refractoriness	—	1450 °C
Recommended Service Temperature	—	1300 °C *
Classification	—	Conventional Dense Castable
Recommended Water Addition	—	18 - 19 %
Bulk Density	110 °C x 24 h	2.10 - 2.20 g/cm³
Material Required (approx.)	—	2,150 kg/m³
Cold Crushing Strength (CCS)	110 °C x 24 h	130 - 160 kgf/cm²
Cold Crushing Strength (CCS)	815 °C x 5 h	75 - 95 kgf/cm²
Modulus of Rupture (MOR)	110 °C x 24 h	75 - 90 kgf/cm²
Modulus of Rupture (MOR)	815 °C x 5 h	35 - 50 kgf/cm²

** Recommended service temperature is the temperature for continuous service and is application-dependent. Actual safe operating temperature can be lower depending on load, atmosphere, thermal cycling, abrasion, chemical attack and lining design. Refractoriness is the temperature at which the material begins to soften and is not a service rating.*

CCS and MOR are cold-strength properties measured on laboratory specimens (CCS 5 x 5 x 5 cm; MOR 23 x 5 x 5 cm, span 20 cm) and are not a measure of strength at operating temperature.

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4. INSTALLATION GUIDELINE

- Add clean, cool water at 18 - 19 % of the dry material weight. Do not exceed the recommended dosage.
- Mix thoroughly using a forced-action pan or paddle mixer until a uniform consistency is obtained. Gravity (drum) mixers are not recommended.
- Place into the formwork in layers and compact with a vibrator until the surface is closed and entrapped air has been released.
- Keep the surface moist and cure for a minimum of 24 hours before stripping the formwork.
- Dry out gradually following a controlled heating schedule, holding at 110 - 150 °C until moisture release stops, prior to first firing.

5. TYPICAL APPLICATIONS

• Furnace lining	• Boiler
• Incinerator	• Chimney and hot gas ducting
• Backup lining	

6. PACKAGING & STORAGE

Item	Description
Packaging	25 kg per bag (moisture-resistant bag with inner liner)
Storage Life	6 months from date of production
Storage Condition	Store in a dry, covered area, clear of the ground and protected from moisture

DISCLAIMER

The values shown in this data sheet are typical properties obtained under controlled laboratory and production conditions and are provided for reference only. They do not constitute a specification or a guarantee of performance. Actual results may vary depending on installation practice, water addition, curing, dry-out schedule, furnace atmosphere, and service conditions. For assistance with product selection or installation, please contact CV Richo Refractory.

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