RICHO Refractory
FIRE BRICK & INSULATING BRICK PRODUCT

TECHNICAL DATA SHEET

REFRACTORY MORTAR SK-34 | HEAT-SETTING FIRECLAY MORTAR

PRODUCT CODE	PRODUCT TYPE	SERVICE TEMP.
Mortar SK-34	Fireclay Mortar (Clay Bonded)	≤ 1300 °C

1. PRODUCT DESCRIPTION

Refractory Mortar SK-34 is a clay-bonded, heat-setting fireclay mortar for laying and jointing SK-34 grade fire brick. It is supplied as a dry powder, mixed with water on site and applied by trowel or buttering. Intended for general fireclay brick linings in moderate-temperature zones.

2. CHEMICAL ANALYSIS (TYPICAL)

Chemical Composition	Typical Value (%)
Al_2O_3 — Alumina	23 - 28
SiO_2 — Silica	65 - 72
Fe_2O_3 — Iron Oxide	≤ 2.5

Indicative chemical values for product reference; not contractual or batch-specific limits.

3. PHYSICAL PROPERTIES (TYPICAL)

Property	Test Condition	Typical Value
Recommended Service Temperature	—	1300 °C *
Compatible Brick Grade	—	SK-34 fire brick
Supply Form	—	Dry powder, mixed with water
Water Addition (approx.)	—	20 - 25 %
Recommended Joint Thickness	—	1 - 3 mm
Bulk Density	110 °C x 24 h	1.65 - 1.85 g/cm³
Cold Crushing Strength (CCS)	110 °C x 24 h	10 - 20 kgf/cm²
Cold Crushing Strength (CCS)	815 °C x 5 h	20 - 40 kgf/cm²

** Recommended service temperature is application-dependent and should not exceed the rating of the brick being laid. Actual safe operating temperature can be lower depending on load, atmosphere, thermal cycling, chemical attack and lining design.*

Indicative values for product reference; not contractual or batch-specific limits. CCS values are measured on mortar specimens (5 x 5 x 5 cm) and do not represent bond strength of a laid joint in service.

4. INSTALLATION GUIDELINE

- Add clean water gradually to the dry mortar (approx. 20 - 25 % of dry weight) and mix to a smooth, buttery trowel consistency. Prepare only the amount that can be used within the working period.
- Make sure brick surfaces are clean and free of dust, oil and loose particles before laying.

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- Apply by trowel or buttering, keeping a uniform joint thickness of 1 - 3 mm. Fill the joints completely, tap the brick into position and remove excess mortar.
- Allow the lining to air dry for a minimum of 24 hours before heating. This is a heat-setting mortar: full ceramic bond develops only after firing, so joint strength before firing is limited.
- Heat up gradually following the dry-out schedule for the lining.

5. TYPICAL APPLICATIONS

• Jointing of SK-34 fire brick	• Furnace lining
• Kiln lining	• Boiler
• Incinerator	• Repair of brick joints

6. PACKAGING & STORAGE

Item	Description
Packaging	50 kg per bag
Storage Life	12 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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