

SPECIAL ACID-RESISTANT BRICK (SiC-90)

The **SiC-90 Special Acid-Resistant Brick** is an advanced refractory product developed for environments with aggressive acidic vapours, high thermal loads, and chemical corrosion. Its designation as "special" stems from its extremely high silicon carbide (SiC) content ($\geq 90\%$), providing exceptional resistance to acidic flue gases, slag infiltration, and thermal conductivity challenges. This brick is engineered for long-term durability in demanding flue, chimney, and off-gas duct conditions.

TECHNICAL SPECIFICATIONS

PROPERTY	VALUE
SiC (%)	≥ 90
Apparent Porosity (%)	≤ 16
Bulk Density (g/cm ³)	≥ 2.65
Cold Crushing Strength (MPa)	≥ 80
Thermal Conductivity (W/m-K at 1000°C)	≤ 6.0
Acid Resistance	Excellent
Alkali Resistance	Good
Refractoriness Under Load (0.2 MPa, °C)	≥ 1600

KEY FEATURES

- Extremely high silicon carbide content for maximum corrosion resistance
- Excellent thermal conductivity and thermal shock stability
- Low porosity and high mechanical strength
- Long service life in high-acid, high-temperature atmospheres
- Chemically inert in acidic exhaust environments

APPLICATION AREAS

- Flue gas ducts and off-gas stacks
- Chimneys and recuperators
- Sulphuric acid plants
- Non-ferrous smelting gas paths
- Zones exposed to acid condensation or sulphur compounds

INSTALLATION NOTES

- Should be installed with chemically compatible acid-resistant mortars
- Avoid high mechanical impact during installation
- Allow for appropriate expansion in high-temperature cycling environments



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