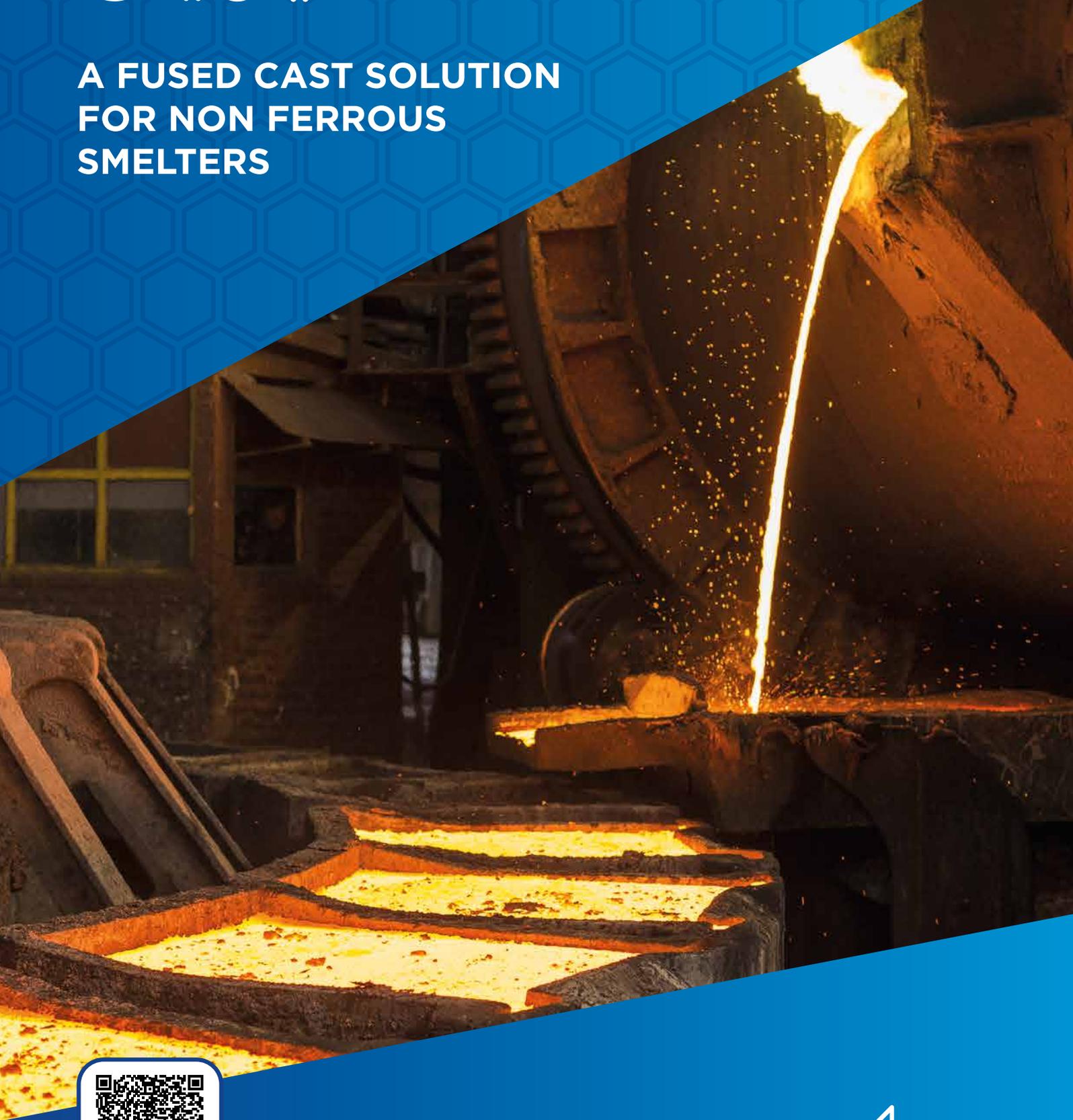


SAINT-GOBAIN PERFORMANCE CERAMICS & REFRACTORIES

# C-104

**A FUSED CAST SOLUTION  
FOR NON FERROUS  
SMELTERS**



  
**SAINT-GOBAIN**

**FOR NON FERROUS SMELTERS**

## **A SUPERIOR ALTERNATIVE TO MAGNESIA-CHROME BONDED PRODUCTS**

C-104 is a fused cast, magnesite-chrome refractory with superior resistance to corrosion, erosion and abrasion. These physical properties are a result of the interlocking crystalline structure formed by electrically melting of the magnesia and chrome ore at temperature exceeding 2.400°C (4.350°F). The product is cast in the form of ingots, then undergoes controlled cooling and is finally cut into standard brick shapes or special pieces.



## **C-104 OFFERS DISTINCT ADVANTAGES FOR SEVERE CONDITIONS EXPERIENCED IN NON-FERROUS SMELTERS**

C-104 is designed to withstand the most severe wear, enabling the furnace wear profile to be uniform and allowing full thickness of the refractory lining to be used. With its inherent composition and properties, C-104 is extremely stable at high temperature and more resistant to thermochemical reactions than conventional bonded refractories. By minimizing rebuild and maintenance costs, C-104 delivers extended furnace life for the finished installation.



## CHEMICAL COMPOSITION

*Average value*

MgO	56.5%
Cr <sub>2</sub> O <sub>3</sub>	20.0%
Al <sub>2</sub> O <sub>3</sub>	7.2%
FeO	12.2%
SiO <sub>2</sub>	2.6%
CaO	1.4%
TiO <sub>2</sub>	0.3%

## CRYSTALLOGRAPHIC ANALYSIS

*Average value*

Magnesio-wuestite	53%
Spinel	40%
Vitreous phase	6%
Metallic phase	1%

PROPERTY	UNITS	TYPICAL VALUE
Bulk density	kg/dm <sup>3</sup>	3.15
True specific gravity	kg/dm <sup>3</sup>	3.7
Cold crushing strength	MPa	400
Thermal conductivity at 1000°C	W/mK	5.0
Refractoriness under load of 0.2 MPa	°C	> 1850
Linear expansion from 0 to 1,500°C	%	1.8

# SAINT-GOBAIN

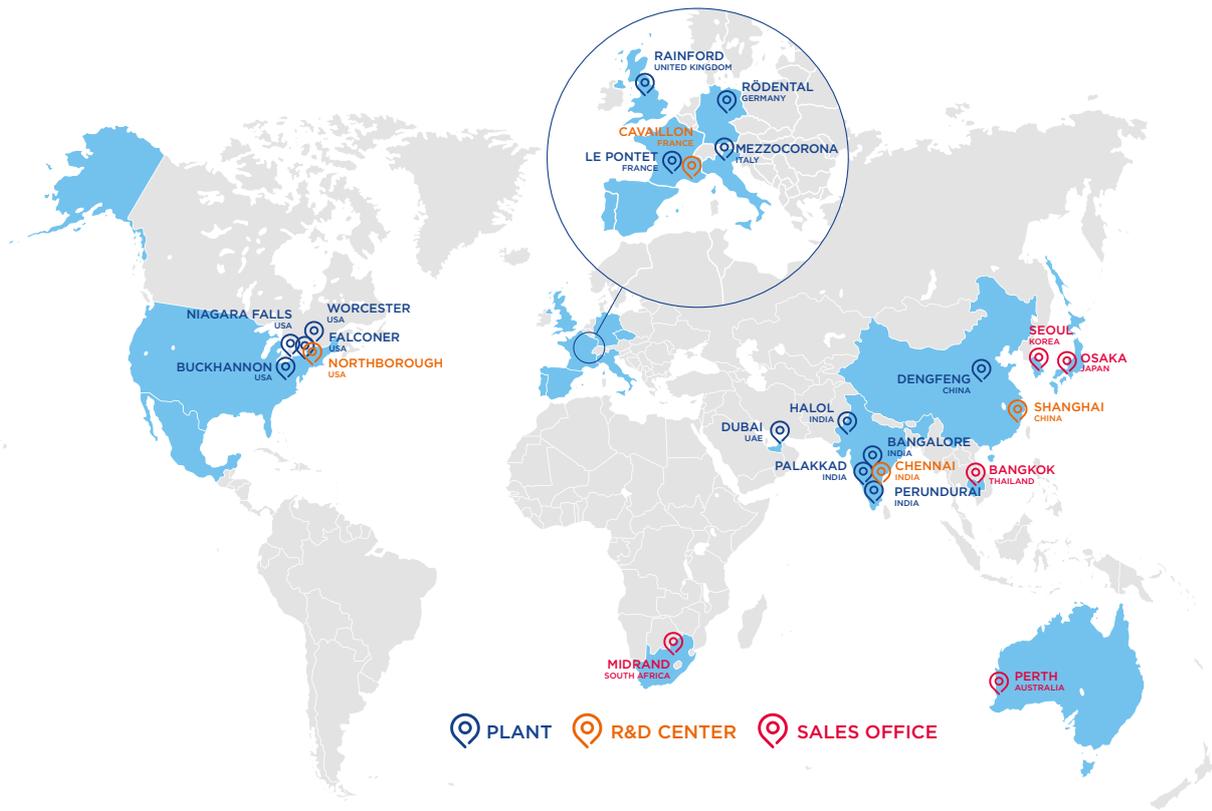
## PERFORMANCE CERAMICS & REFRACTORIES

### OUR MISSION

To design, develop and supply solutions and services for extreme operating industrial conditions. Our engineered ceramics and refractory products are manufactured to the highest industrial standards and deliver enhanced performance while minimizing environmental impact.

**PIONEERING CERAMIC SOLUTIONS FOR EXTREME INDUSTRIAL APPLICATIONS AND A GREENER WORLD.**

# OUR GLOBAL PRESENCE



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 R&D CENTER 
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