C-104®

A FUSED CAST SOLUTION FOR NON FERROUS SMELTERS

SAINT-GOBAIN

A superior alternative to magnesia-chrome bonded products

C104 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 2400°C (4350°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.

Outotec® Flash Smelting Process

C104 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.

Chemical Composition	*Average value*
MgO	56,5%
Cr_2O_3	20,0%
Al_2O_3	7,2%
FeO	12,2%
SiO_2	2,6%
CaO	1,4%
TiO_2	0,3%

Crystallographic analysis	*Average value*
Magnesio-wuestite	53%
Spinel	40%
Vitreous phase	6%
Metallic phase	1%

Property	Units	Typical value
Bulk density	kg/dm³	3.15
True specific gravity	kg/dm³	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

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