



LEADING MANUFACTURERS OF
REFRACTORIES
IN NORTH INDIA

WITH A MANUFACTURING CAPACITY OF OVER
90,000 METRIC TONNES PER ANNUM

SOMAL REFRACTORIES IS ONE OF THE LEADING MANUFACTURERS OF REFRACTORIES IN NORTH INDIA

Today Somal Refractories is one of the leading manufacturers of Refractories in India. The Management is very closely involved in every step of every process enabling the company to live by its motto- Quality You Can Trust. We make all kinds of Shaped and Unshaped refractories as well as related industry products such as High Alumina Bricks, Fire Clay Bricks, High Alumina cements, Ramming masses, Castables and more. The organisation is ISO 9001:2015 certified and also has a certified in-house Research and Development Centre for thorough testing right from the raw material to the finished product.

In accordance with the company policy, we implement international standards and norms for all our products. We provide custom-fit refractories for specialised industries world-wide. Backed by a team of experts, we procure supreme materials and manufacture exceptional quality products, delivering to your doorstep. Maintaining a customer centric approach, we also provide the added advantage- of stocking for our local clients. Human Resource being a key aspect of Somal Refractories, we train our staff from time to time to stay in-tune with the latest proficiencies and processes in the refractory industry.



Progression Through Tradition

OUR FOUNDER

LATE MR. GURIQBAL SINGH SOMAL

He completed Mechanical Engineering from Ludhiana and pursued his MBA from Columbia Business School. Upon his return from the U.S.A in 1974, he decided to diversify the 5-generation old business of brick kiln and started manufacturing refractories. The business started from a single downdraft kiln. In a span of 40 years, he increased the production capacity to 5000 tonnes per month and has been a pioneer in the industrial landscape of Punjab.

MANAGING DIRECTOR

MR. GURSIMAR IQBAL SOMAL

He completed Bachelors of Engineering in Electrical Engineering from PEC (Punjab Engineering College) in 2012. Thereafter, he worked with General Electric in Renewable Energy. In 2017 he completed his masters in Business Administration from Columbia Business School, New York; Specializing in Finance. Since then, Mr. Gursimar joined the company with a sole goal in mind- to forge ahead by honouring the rich history of the company and blending it with the new.



MESSAGE FROM THE MANAGING DIRECTOR

I took over as Somal Refractories' leader after Guriqbal Somal, our Founder, and my father passed away in 2018. When I took over in 2018, the business operated under major difficulties because our main product was losing value due to modern technological advancements.

Understanding the mission from day one meant I should protect our founder's legacy while ensuring the well-being of all stakeholders, particularly the 500+ employees who include our organisation's second-generation and third-generation family members.

The situation required a radical transformation of our operations. We combined new ideas with existing practices to expand past our small range of products and restricted local customer base. We aimed to produce valuable products which would succeed against international market competition.

Somal Refractories maintains current international operations in the United States as well as markets in the United Kingdom, Denmark, and Thailand, along with additional countries, through ongoing strategic partnerships with businesses. Since 2018, Somal Refractories has achieved explosive growth as its product range evolved from 5 initial offerings to over 50 new products in 2024. Our business no longer depends on induction furnaces within specific regions because we provide refractories to the power generation sector and glass manufacturing facilities, waste-to-energy facilities, aluminium smelting facilities, and other industrial sectors.

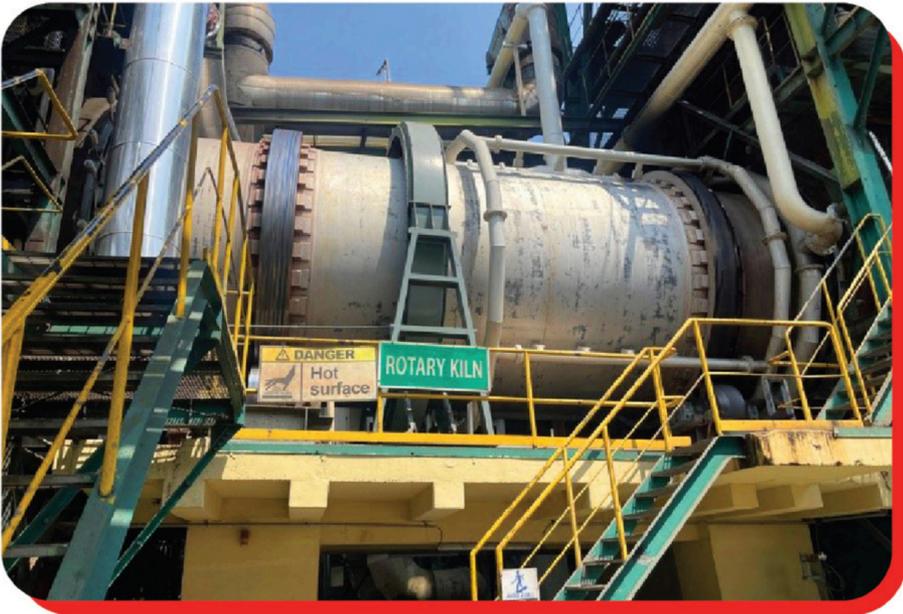
Our company has shown a remarkable compound annual growth rate (CAGR) exceeding 40% throughout the previous six years. We have scheduled a significant facility expansion for 2025 to start manufacturing magnesia carbon bricks and flow control refractories. These developments have made us ready to penetrate steel industry markets, thereby boosting our expected revenue streams.

The company established a technical manufacturing agreement with Vulcan Refractories---a UK company---to develop infrared heaters, which marks our first entry into technical ceramics production. The next phase of our work will focus on advanced ceramic composites and nano-materials.

Somal Refractories stands strong because we combine leading-edge research, innovative thinking, and adaptability with diverse product selection and positive workplace environment dynamics. Our foundational pillars will guide us through upcoming challenges and opportunities as we move toward the future.



 **Infrastructure**





Research & Development (R&D)

GURIQBAL SOMAL REFRACTORY RESEARCH AND DEVELOPMENT CENTRE



R & D INFRASTRUCTURE

- ▶ Chemical Analysis (Fe, Al, MgO, TiO₂ etc)
- ▶ PLC furnace (1700°C)
- ▶ PCE
- ▶ RUL Furnace (2000°C)
- ▶ CTM (Compression Testing Machine) for CCS
- ▶ Hobart Mixture
- ▶ Physical Balance for Apparent Porosity
- ▶ MOR (Modulus of Rupture)
- ▶ HMOR
- ▶ Particle Size Analysis
- ▶ Abrasion Resistance
- ▶ Flame Photometer
- ▶ Hydrometer
- ▶ Spectro Photometer
- ▶ Thermal Spalling Apparatus
- ▶ Thermal Conductivity Apparatus
- ▶ Microscopy



NEUTRARAM

Premium Neutral Ramming Mass for Induction Furnace Lining
Engineered for Excellence | Trusted by Steelmakers

INTRODUCTION TO NEUTRARAM

Somal Refractory presents NEUTRARAM, a high-performance neutral ramming mass designed specifically for induction furnace linings used in the melting of stainless steel, alloy steel, and mild steel. Developed with a deep understanding of steel melting dynamics and evolving steel melting demands, NEUTRARAM ensures excellent lining life, minimal contamination, and maximum furnace efficiency.

Our material is manufactured using select-grade calcined magnesia and high-purity alumina with a precisely engineered grain size distribution and superior thermal stability. NEUTRARAM is formulated to withstand the aggressive thermal and chemical conditions typical in induction furnaces while offering ease of installation and consistency in every batch.

KEY FEATURES

- ▶ **High Thermal Shock Resistance**
Prevents cracking and peeling under frequent heating and cooling cycles.
- ▶ **Excellent Erosion Resistance**
Provides a dense and strong lining structure, minimizing wear during high-temperature metal contact.
- ▶ **Chemical Neutrality**
Prevents unwanted reactions with various steel grades, especially during alloying and refining processes.
- ▶ **Improved Lining Life**
Designed to reduce downtime and maintenance costs by offering a long-lasting performance.
- ▶ **Low Sintering Temperature**
Ensures quicker sintering and early furnace readiness, enhancing productivity.
- ▶ **Uniform Heat Transfer**
Optimized grain packing leads to consistent heat distribution during melting operations.

APPLICATIONS

NEUTRARAM is ideal for induction furnaces ranging from 500 kg to 30 MT capacity and supports melting operations in:

- ▶ **Stainless Steel Melting**
Clean melting, free from carbon pick-up and silicate contamination.
- ▶ **Alloy Steel Melting**
Stable refractory interaction to preserve alloy integrity.
- ▶ **Mild Steel Melting**
Offers cost-effective performance with high lining reliability.

PRODUCT VARIANTS

Products	Chemical Analysis			Density (g/cm ³)	Temperature Limit
	Al ₂ O ₃	MgO	SiO ₂		
NUTRARAM 1181	> 85	> 11	< 0.3	2.9	1800
NUTRARAM 1151	> 85	> 12	< 0.3	3	1750
NUTRARAM 1172	> 70	> 22	< 0.6	3.1	1800
NUTRARAM 1171 C	> 87	Cr > 7	< 0.5	2.95	1800
NUTRATOP 1493	> 85	> 5	< 0.2	2.95	1700

NUTRARAM



INSTALLATION & SUPPORT

Somal Refractory provides complete technical support, including:

- ▶ Furnace Lining Design Consultation
- ▶ On-site Installation Supervision
- ▶ Performance Monitoring
- ▶ Customized Solutions Based on Melting Practices

WHY CHOOSE SOMAL REFRACTORARY?

With decades of experience in the refractory industry, **Somal Refractory** combines product innovation, raw material control, and technical service to deliver reliable and efficient refractory solutions. NEUTRARAM is a testament to our commitment to quality, performance, and customer satisfaction.

PACKAGING & SUPPLY

- ▶ **Standard Packaging:** 25 kg moisture-proof HDPE bags
- ▶ **Bulk Packaging:** Jumbo bags available on request
- ▶ **Shelf Life:** 12 months from manufacturing under proper storage



BOTTOM POURING SETS

Bottom pouring sets are critical components used in steel casting for ensuring smooth, controlled, and slag-free metal flow into ingot molds. Our bottom pouring sets are made from high-alumina refractory materials with high thermal shock resistance, abrasion resistance, and consistent dimensional accuracy. They are designed to withstand repeated heating cycles and ensure reliable performance during each casting operation.



Somal Refractories has been manufacturing Bottom Pouring sets since 1974. Bottom Pouring sets are mainly used in Ingot Casting. They range from 30% Alumina to 90% Alumina. The main features are thermal stability and extremely high Abrasion resistance. This main requirement of Bottom Pouring refractory are high thermal shock resistance, high hot strength and high chemical stability at very high temperatures.

BAUXITE BRICKS



Bauxite bricks are manufactured from superior-grade raw bauxite and fused alumina. These high-alumina bricks offer excellent resistance to spalling, abrasion, and chemical attack. Commonly used in the linings of rotary kilns, furnaces, and ladles, bauxite bricks perform exceptionally well in environments subjected to high temperatures and corrosive slags.

Manufactured from Guyana/Chinese Bauxite and are widely used in steel ladles. The Bauxite brick ranges from 50% to 85% alumina. Appropriate for applications up to 1700*c.

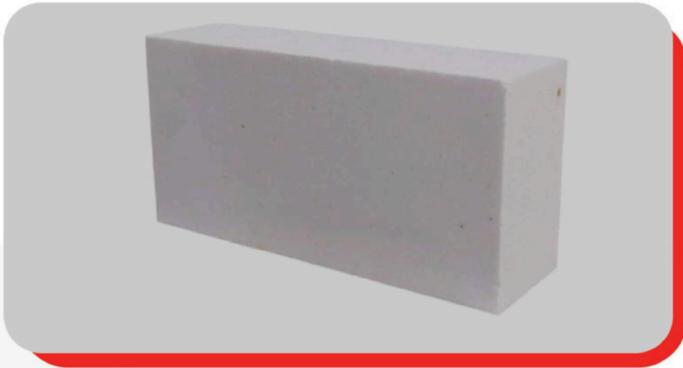
SILLIMANITE ANDALUSITE

Sillimanite bricks are composed of natural or synthetic sillimanite minerals. Known for their low thermal expansion and excellent resistance to acid slag and thermal shock, these bricks are ideal for applications in glass tanks, reheat furnaces, and kiln crowns. They retain strength at high temperatures and offer extended service life in demanding furnace conditions.



These are made with a combination of sillimanite/ Andalusite and fused Alumina or fused mullite depending on the application. These have lower iron as compared to Bauxite bricks and have exceptional Hot properties. The most widely used product is the 62 dense bricks.

MULLITE BRICKS



Mullite bricks are engineered using synthetic or natural mullite and are highly valued for their excellent mechanical strength, thermal stability, and low thermal conductivity. They are suitable for furnace roofs, sidewalls, and other areas exposed to direct flame or high temperatures. Mullite bricks also resist chemical corrosion, making them ideal for use in ceramic, steel, and petrochemical industries.

Mullite bricks are used in very high temperature applications with Alumina content greater than 70% and are usually made with a combination of fused mullite and tabular Alumina.

CUSTOM SHAPES

We manufacture customised refractory shapes tailored to match specific equipment and process needs. Whether for burners, nozzles, spouts, tap holes, or intricate precast blocks, our shapes are produced with high precision, using quality raw materials and state-of-the-art moulding techniques. We have a very tight dimensional tolerance and can meet specifications of the highest standard. These components help improve furnace efficiency, reduce downtime, and support specialized operations across steel, foundry, and non-ferrous industries.





Basic Bricks

MAGNESIA CARBON

Magnesia Carbon is made from high purity Large Crystal magnesia and natural graphite added with special anti-oxidant, has high resistance to slag for both aluminium and Silicon killed steel. It is highly suitable for steel ladle, electric arc furnace & Basic oxygen furnace. We have special magnesia carbon with low carbon content for transfer ladle. It has superior resistance to corrosion, erosion and abrasion at operating temperature. We can make tailor made products according to operation and customer specification.



MAGNESITE



Magnesite is made from dead burnt magnesia. We offer products with Magnesia from 70% Mgo to 98% Mgo. It has low porosity, high bulk density, high CCS and high refractoriness under load. We can make tailor made products according to customer specification.

CHROME MAGNESITE

Chrome Magnesite is made from natural Magnesia and Chromite fired at high temperature in tunnel kiln. We make Chrome Magnesite and Magnesia Chrome with Cr₂O₃ from 5% to 30% in the brick. These bricks have low porosity, high bulk density, high cold crushing strength and high refractoriness under load. It is highly suitable for Ladle backup to small electric arc furnace, reheating furnace.





CONVENTIONAL CASTABLE

High-strength castables based on calcium aluminate cement, ideal for general-purpose applications in furnaces, kilns, and ladles. Designed for easy placement, high density, and good abrasion resistance.

Products	Chemical Analysis		Density (g/cm ³)	Temperature Limit	Installation Method
	Al ₂ O ₃	Fe ₂ O ₃			
HEATCAST C	47	< 1.5	2.10	1500	Vibration Cast
HEATCAST K	57	< 1.5	2.35	1600	Vibration Cast
HEATCAST A	88	< 1.8	2.75	1750	Vibration Cast

LC CASTABLE (LOW CEMENT CASTABLE)

Engineered for higher strength, better density, and superior thermal shock resistance due to reduced cement content and addition of fine dispersants.

Products	Chemical Analysis		Density (g/cm ³)	Temperature Limit	Installation Method
	Al ₂ O ₃	Fe ₂ O ₃			
LCMEX 50	47	< 1.2	2.30	1550	Vibration Cast
LCMEX 60	60	< 1.5	2.60	1600	Vibration Cast
LCMEX 70	70	< 1.5	2.80	1600	Vibration Cast
LCMEX 80	79	< 1.5	2.85	1700	Vibration Cast

NO CEMENT CASTABLE (NCC)

Cement-free technology using colloidal silica or sol-gel bonding. Offers ultra-low porosity, excellent corrosion resistance, and exceptional thermal shock performance.

INSULATING CASTABLE

Lightweight and thermally efficient materials for backup and low-temperature linings. Ensures energy saving and heat loss reduction.

- **Bulk Density:** 0.8 to 1.5 g/cc
- **Applications:** Back-up insulation, duct linings, furnace insulation

MORTAR

Ready-to-use and high bonding strength mortar for installation and joining of bricks and precast shapes.

- **Types:** Air-setting & Heat-setting
- **Applications:** Brick masonry, patchwork, joint sealing



Repair & Application Masses



GUNNING MASS

Refractory material for pneumatic gunning application, offering strong adhesion, low rebound, and excellent thermal shock resistance.

➤ **Applications:** EAF side walls, ladles, boilers, cement kilns



SPRAY MASS

Ready-to-use mass for spray repair of induction furnace linings without dismantling. Provides monolithic layer over damaged surface.

➤ **Features:** Quick repair, low downtime

➤ **Applications:** Induction furnace wall restoration



COIL GROUT

High-purity, non-conductive grout for coil embedding and insulation. Prevents coil movement and provides electrical insulation.

➤ **Grade:** 94% Alumina

➤ **Applications:** Induction furnace coil embedding



NFC [NOZZLE FILLING COMPOUND]

Flowable granular material used in ladles to prevent steel tap hole blockage. Ensures smooth opening with minimal oxygen lancing.

➤ **Type:** Silica or Alumina-based

➤ **Applications:** Steel ladle bottom nozzle

Our Monolithic Product Range

NUTRARAM



CASTABLES



SPRAYSET



GROUTMAX



GUNNEX



NOZOFILL



MORTEX



INSOLITE



	IRON MAKING							STEEL MAKING			STEEL REFINING			CASTING			
	Pellet Plant	Coke oven	Lime Kiln	Blast Furnace	Torpedo Ladle	Transfer Ladle	DRI Kilns	Electric Arc Furnace	Basic Oxygen Furnace	Induction Furnace	Ladle Refining Furnace	Vacuum Degassing AOD	Bottom Pouring	Top Pouring	Teeming Ladle	Reheat Furnace	Tundish
Super Duty/Fire Bricks																	
High Super Duty		■											■	■			
Medium Superduty																	
Low Superduty																	
Fire Clay	■	■	■	■	■	■					■	■	■	■	■		
High Alumina Bricks																	
Bauxite						■								■	■		
Silimanite																	
Andulasite			■	■	■	■											
Mullite			■	■	■								■	■			
Corundum Bricks																	
99 Alumina				■													
Alumina Spinel																	
Chrome Corundum																	
Zircon Corundum																	
Basic Bricks																	
Magnesia			■					■	■		■	■	■				
Fosterite Bricks																	
Magnesia Chrome								■				■					
Chrome Magnesita																	
Magnesia Spinel			■			■											
Magnesia Carbon								■	■		■	■				■	
Carbon containing Bricks																	
Alumina Carbon																	
Alumina Magnesia Carbon														■			
Alumina SiC Carbon																	
Castables																	
Conventional Castables	■	■		■	■		■			■							
Low Cement Castables	■	■		■	■		■			■							
Ultra Low Cement Castables							■										
No Cement Castables				■													
Gel Bonded Castables				■													
PCPF Blocks	■	■		■													
Insulating Castables																	
Plastic Castable																	
Basic Monolithics																	
Ramming Mass								■	■	■							
Gunning Mass								■	■								
Spray Mass																	
Mortars								■	■								
Fettling Mass								■									
Filling Mass								■									

OUR GLOBAL NETWORK



- ✓ India
- ✓ Thailand
- ✓ United Kingdom
- ✓ United States
- ✓ Denmark
- ✓ Madagascar
- ✓ Kenya
- ✓ Bahrain
- ✓ France
- ✓ Australia
- ✓ South Africa
- ✓ China
- ✓ Guyana
- ✓ Netherland



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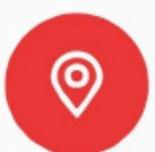
Somal Pipes Pvt Ltd



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Rohit Arora
+91 98159 30500



Giaspura, Industrial Area-C,
Ludhiana-141014, Punjab.



Description:

HEATCAST A is a 88% alumina Dense Castable.

PROPERTY	VALUE
Type	Dense Castable
Maximum Service Temperature	1700°C
Maximum Grain Size	6 mm
Standard Packaging	25 KG
Material Required	2750 kg/m ³
Water Addition	8 – 10%
Storage Life	6 Months

Chemical Analysis:

Al ₂ O ₃	Fe ₂ O ₃	CaO
86 - 88 %	< 1.5 %	5.0 %

Physical Properties:

Property	Unit	Drying at 110 °C	Heating at 1500 °C
Bulk Density	gm/cc	2.70	
Cold Crushing Strength	kg/cm ²	600 – 700	
Permanent Linear Change	%		±1.0



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www.somalrefractories.com



Village Gaispura, G.T. Road,
Near Sua Chowk, Ludhiana

Description:

HEATCAST C is a 50% alumina Dense Castable.

PROPERTY	VALUE
Type	Dense Castable
Maximum Service Temperature	1500°C
Maximum Grain Size	6 mm
Standard Packaging	25 KG
Material Required	2150 kg/m ³
Water Addition	9 – 11%
Storage Life	6 Months

Chemical Analysis:

Al ₂ O ₃	Fe ₂ O ₃	CaO
48 - 50 %	< 1.3 %	5.5 %

Physical Properties:

Property	Unit	Drying at 110 °C	Heating at 1500 °C
Bulk Density	gm/cc	2.10	
Cold Crushing Strength	kg/cm ²	300 – 350	
Permanent Linear Change	%		±1.0



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Near Sua Chowk, Ludhiana

Description:

HEATCAST K is a 60% alumina Dense Castable.

PROPERTY	VALUE
Type	Dense Castable
Maximum Service Temperature	1600°C
Maximum Grain Size	6 mm
Standard Packaging	25 KG
Material Required	2250 kg/m ³
Water Addition	9 – 11%
Storage Life	6 Months

Chemical Analysis:

Al ₂ O ₃	Fe ₂ O ₃	CaO
58 - 60 %	< 1.2 %	< 5.5 %

Physical Properties:

Property	Unit	Drying at 110 °C	Heating at 1500 °C
Bulk Density	gm/cc	2.25	
Cold Crushing Strength	kg/cm ²	350 – 400	
Permanent Linear Change	%		±1.5



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Near Sua Chowk, Ludhiana

Description:

NUTRARAM 1181 is a high alumina dry vibratable refractory containing magnesia for lining Coreless induction furnaces melting steel.

PROPERTY	VALUE
Type	DRY – RAM
Maximum Service Temperature	1800°C
Maximum Grain Size	8 mm
Standard Packaging	25 KG
Material Required	3050 kg/m ³
Water Addition	NONE
Storage Life	12 Months

Chemical Analysis:

Al ₂ O ₃	MgO	SiO ₂	Fe ₂ O ₃	CaO	Na ₂ O+K ₂ O
85 – 87 %	12 – 13 %	0.2 %	0.3 %	0.1 %	0.3 %

Physical Properties:

Property	Unit	Drying at 1400 °C	Heating at 1650 °C
Bulk Density	gm/cc	2.60	2.70
Cold Crushing Strength	kg/cm ²		700
Permanent Linear Change	%	+3.0	+4.6



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DOLOMITE BRICKS

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	RUL taoC	R2O3	MgO	CaO	C	ZrO ₂
SP MG 15	10	3	550	1700	2.5	82	14		
SP MG 20	10	3	550	1700	2.5	77	19		
SP MG20S	10	3	550	1700	2.5	73	19		4
SP MG 25	10	3	550	1700	2.5	73	24		
SP MG 30	10	3	550	1700	2.5	67	29		
SP MG30S	10	3	550	1700	2.5	63	29		4
SP MG40	10	3	550	1700	2.5	57	39		
SPMG 40S	10	3	550	1700	2.5	55	38		4
SPMG20R	6	3	500	1700	2.5	75	19	3	
SPMG30R	6	3	500	1700	2.5	65	29	3	
SPMG40R	6	3	500	1700	2.5	56	38	3	

MAGNESIA BRICKS

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	RUL taoC	PCE(SK)	Fe ₂ O ₃	MgO	SiO ₂
SP KGT 88	20	2.85	400	1580	>40	1.5	87.5	6.5
SP MGT90	20	2,85	400	1600	>40	1.5	90	4.5
SP MGT92	18	2.88	450	1630	>42	1.5	91.5	4
SP MGT 94	18	2.9	450	1650	>42	1.5	93.5	3
SP MGT 96	16	2.93	500	1700	>42	0.8	95.5	1
SP MGT 97	16	2.95	500	1700	>42	0.6	96.7	0.5

MAGNESIA CARBON BRICKS

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	HMOR at 1400oC(kg/cm ²)	MgO	Al ₂ O ₃	C
SP MGC5	6	3.02	400	80	87		5
SP MGC8	5	3	400	80	83		8
SP MGC10	5	2.98	400	80	81		10
SP MGC 12	5	2.98	350	80	80		12
SP MGC 14	4.5	2.96	350	80	78		14
SP MGC 16	4	2.92	300	80	76		16
SP MGC 18	4	2.9	300	80	74		18
SP MGC 20	4	2.88	250	80	72		20
SP MAC 5	8	2.99	350	40	81	5	10
SP MAC 7	8	2.98	300	40	79	7	10
SP MAC 10	8	2.98	300	40	74	10	10

MAGNESIA CARBON BRICKS FOR STEEL LADLE

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	HMOR at 1400oC(kg/cm ²)	MgO	C
SP MC FB	3	2.98	400	70	96.5	10
SP MC FBS	3	3	400	80	97	10
SP MC ML NP	3	3	400	70	96.5	8
SP MC ML NPS	3	3	400	80	97	10
SP MC MLP	4	2.98	400	90	97	10
SP MC ML PS	3	3.02	400	100	97.5	10
SP MC SL NP	3	3	400	80	97	10
SP MC SL NPS	3	3	400	80	97.5	12
SP MC SLNPSS	3	3	450	80	97	10
SP MC SL P	3	3.02	450	80	97.5	10
SP MC SLPS	3	3.02	450	80	97.5	12
SP MCSL PSS	3	3.02	450	80	98	12

MAGNESIA CARBON BRICKS FOR BOF FURNACE

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	HMOR at 1400oC(kg/cm ²)	MgO	C
SP MC LD1	6	3.02	400	80	97	10
SP MC LD2	5	3	400	100	97	10
SP MC LD3	5	3	400	80	96.5	10
SP MC LD 3S	5	3.02	450	80	97.5	12
SP MC LD4	4.5	2.98	400	80	97	10
SP MC LD4S	4	3.02	400	80	97.5	12
SP MC LD5	4	3	400	70	97	10
SP MC LD6	4	3	400	100	97.5	10
SP MCLD6SS	8	3.02	450	100	97	10
SP MC TB	8	3.02	450	100	98	12
SP MAC TS	8	3.02	450	100	98	12

MAGNESIA CARBON BRICKS FOR ARC FURNACE

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	HMOR at 1400oC(kg/cm ²)	MgO	C
SP MC EAF1	3	3.02	400	80	97	10
SP MC EAF 2	3	3	400	100	97	10
SP MC EAF 3	3	3	400	80	97	12
SP MC EAF 4	3	3	450	100	97	12
SP MC EAF 5	3	3.01	400	120	97	14
SP MC EAF 6	3	3.02	400	80	97.5	10
SP MC EAF 7	3	3	400	80	97.5	12
SP MC EAF 8	3	3	400	80	97	6
SP MC EAF 9	3	3	450	80	97	8
SP MC EAF10	3.5	2.98	350	70	97	16
SP MC EAF11	3.5	2.96	350	70	97.5	18
SP MC EBTS	3	3.02	400	100	97.5	12
SP MC EBTS	3	3.02	350	70	97.5	12
SP MC EAFP	5	2.95	400	60	97.5	14
SP MC EAFPS	3	3	450	100	97.5	12

ALUMINA MAGNESIA CARBON BRICKS

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	MgO	Al ₂ O ₃	C
SP AMC 60	8	3.05	400	58	25	7
SP AMC 65	8	3.02	400	68	15	7
SP AMC 70	7	3	400	71	11	7
SP AMC 75	6	3.04	400	76	11	7
SP AMC 80	6	3.1	450	80	10	6
SP AMC 85	6	3.15	450	85	10	6

ALUMINA MAGNESIA CARBON BRICKS

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	MgO	SiC	C
SP ASC50	10	2.6	400	50	7	12
SP ASC 60	10	2.65	400	60	7	12
SP ASC 65	8	2.65	400	65	8	14
SP ASC70	8	2.75	400	70	8	12
SP ASC 70S	7	2.85	450	71	8	14
SP ASC75	7	2.9	450	75	13	10

MAGNESIA CHROME & CHROME MAGNESIA BRICKS

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	RUL taoC	PCE(SK)	MGO	Cr ₂ O ₃
SP DUMAGCR	23	2.55	250	1500	36	35	11
SP MCH TY1	25	2.65	250	1500	36	36	12
SP MCH TY2	25	2.65	250	1550	36	45	14
SP MCH TY3	23	2.7	300	1650	38	50	14
SP MCHD	21	2.75	350	1650	38	52	15
SP CHMTY1	24	2.77	250	1550	38	35	18
SP CHMTY2	24	2.8	250	1600	40	40	22
SP CHMD	24	2.92	300	1650	38	50	18
SP CHMDB	22	2.95	350	1700	40	50	22
SP CHMDBS	20	3	300	1700	40	52	20

DIRECT BONDADED & REBONDED MAGNESIA CHROME

Quality	AP%	BD (gm/cc)	CCS (kg/cm ²)	RUL taoC	PCE(SK)	MGO	Cr2O3
SP DBMC1	20	3.1	400	1700	42	58	18
SP DBMC2	20	3.15	400	1700	42	60	20
SP RBMC1	18	3.2	450	1700	42	58	20
SP RBMC2	18	3.2	450	1700	42	60	20
SP RBMC3	18	3.22	450	1700	42	56	21
SP RFMC	16	3.25	500	1700	42	56	18
SP RFMCS	16	3.25	500	1700	42	56	20
SP RFMCR	16	3.25	500	1700	42	56	21
SP RFMC!	16	3.25	500	1700	42	55	22
SP RFMC2	16	3.23	500	1700	42	54	23