



# SAS EXPORTS INDIA

(REFRACTORY DIVISION – ISO APPROVED)

PRODUCT EXCELLENCE, QUALITY, TIMELY DELIVERY, CONSISTANCY, RELIABILITY, EXPIENCED MANAGEMENT



**MANUFACTURERS AND EXPORTERS OF REFRACTORIES**

**SAS EXPORTS INDIA.**

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# CERTIFICATE

This is to Certify that the Management System of  
**S.A.S EXPORTS INDIA**

703/704 , X WING, GOLDEN RAYS, SHASTRI NAGAR ,  
ANDHERI WEST , MUMBAI 400 053, INDIA.

has been assessed and found to be in compliance with the  
requirements of the standard

## ISO 9001: 2015

### Quality Management System

This certificate is valid for the following products or service range

EXPORTERS, PROCESSORS , SERVICE PROVIDERS OF FULL RANGE OF REFRACTORIES,  
FERRO ALLOYS AND INDUSTRIAL CONSUMABLES.

The validity of certificate is subject to regular surveillance audit on or before below mentioned dates  
and it's only valid after successful surveillance with continuation letter issued by UCSPL

Initial Date of Certification : 09/02/2023

Current Date of Certification : 09/02/2023

Date of Expiry :  
08/02/2026

1st Surveillance Audit  
08 February 2024

Certification Number :  
UCS8022-23B10509

2nd Surveillance Audit  
08 February 2025



Authorized Signatory



KAB-QC-80

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## COMPANY PROFILE

SAS Exports India was established during 1998 as channel partner for marketing of reputed Refractory makers. Now it has emerged as leading ISO approved manufacturer/exporter of Refractories having manufacturing facilities in India. The products manufactured are:

- Fire Clay and High Alumina Bricks along with respective castables, mortars, ramming masses, gunning material, Plastic Refractories PCPF shapes etc.
- Insulation Bricks along with respective insulation castables and mortars.
- Basic Bricks like Magnesite, Magnesite Chrome & Chrome Magnesite bricks along with basic castables, mortars, ramming masses and gunning materials
- Acid resistant Bricks & Mortar.
- Silica Ramming Mass (Acidic Ramming Mass) Post and Pre Mixed.
- Ladle Covering Material, EBT Filling Compound and Casting Powder etc.

At present SAS have emerged as fast growing and reputed exporter of refractories in Middle East, Africa and Indian sub-continent. The top promoters of the company are highly qualified in the field of Refractories having a vast knowledge and experience of more than forty years. With our experienced work force and wide range of products we have been serving various industries like Steel, Aluminum, Copper, Petroleum, Chemical and other miscellaneous industries. We have a competent application engineering team to provide technical back up to our customers. We have Indian and imported machineries at our manufacturing facilities. Production capacity of around eighty thousand tons in total. Our full-fledged laboratory has facilities for chemical and physical testing of all types of Refractories.



We have wide range of Fire Bricks with Alumina 30% to 50% manufactured from Calcined Fire Clay, Kaolin etc as per user's requirements. For High Alumina Bricks with Alumina 55% to 85% raw materials like Sillimanite, Calcined Alumina, Andalusite etc are used.

## PRODUCT DATA - FIRE CLAY AND HIGH ALUMINA BRICKS

BRAND	Al <sub>2</sub> O <sub>3</sub> % min	Fe <sub>2</sub> O <sub>3</sub> % max	Bulk Density Gm/cc min	Apparent Porosity % max	Cold Crushing Strength Kg/cm <sup>2</sup> min	Refractoriness Under Load Ta °C min	Refractoriness (Pyrometric Cone Equivalent – Orton Cone) (°C)	Permanent Linear Change % max
SAS-AL30D	30	2.50	2.00	25	250	1350	30	+ 0.5 at 1450 °C /2hrs
SAS-AL40D	40	2.50	2.10	23	300	1400	34	+ 0.5 at 1450 °C /2hrs.
SAS-AL42D	42	1.80	2.25	16	500	1480	34	+ 0.5 at 1450 °C /2hrs.
SAS-AL45B	45	2.50	2.20	22	300	1450	34	+ 1.0 at 1450 °C /2hrs.
SAS-AL45D	45	1.50	2.25	16	500	1520	34	+ 0.5 at 1450 °C /2hrs.
SAS-AL50B	50	2.50	2.30	22	350	1430	35	+ 1.0 at 1450 °C /2hrs.
SAS-ALSILL	56	1.50	2.40	21	400	1500	36	+ 1.0 at 1450 °C /2hrs.
SAS-AL60B	60	3.00	2.50	23	350	1430	36	+ 1.0 at 1600 °C /2hrs.
SAS-ALSILL 60D	60	1.80	2.30	20	600	1550	36	+ 0.2 at 1450 °C /2hrs.
SAS-AL62D	62	1.50	2.45	16	700	1600	36	+ 0.2 at 1450 °C /2hrs.
SAS-AL70B	70	3.00	2.60	23	400	1470	36	+ 3.0 at 1600 °C /2hrs.
SAS-AL72B	72	2.50	2.70	22	400	1540	36	+ 2.5 at 1600 °C /2hrs.
SAS-AL MUL 70	72	0.80	2.55	18	600	1750	36	+ 0.5 at 1600 °C /2hrs.
SAS-AL77B	77	1.10	2.75	19	700	1650	37	+ 1.40 at 1600 °C /2hrs.
SAS-AL80B	80	3.50	2.80	23	400	1500	36	+ 1.5 at 1600 °C /2hrs.
SAS-AL85D	85	1.50	2.80	19	700	1600	36	+ 0.5 at 1600 °C /2hrs.
SAS-AL90	90	3.50	2.85	23	400	1500	36	+ 1.5 at 1600 °C /2hrs.
SAS-AL 95D	94	0.50	3.00	18	800	1700	41	+ 0.1 at 1600 °C /2hrs.

ALL THE ABOVE DATA PERTAINS TO STANDARD PRESSABLE SHAPES SUBJECT TO REASONABLE VARIATIONS. SIZE TOLERANCE WILL BE MAINTAINED AS PER INDIAN STANDARD. BRICKS WITH PROPERTIES OF HIGHER VALUES AVAILABLE WHERE APPLICATIONS REQUIRE THE SAME. TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIREMENTS.

## PRODUCT DATA - FIRE CLAY AND HIGH ALUMINA MORTARS

BRAND	Al <sub>2</sub> O <sub>3</sub> % (Min.)	Fe <sub>2</sub> O <sub>3</sub> % (Min.)	Setting	Grading (mm)	Service Temperature °C	Refractoriness Pyrometric Cone (°C)	Application
SAS M - 30	30	2.5	Ceramic	0.05	1200	30	FOR LYING OF 30% ALUMINA BRICKS
SAS M - 40	40	2.5	Ceramic	0.05	1250	32	FOR LYING OF 45% ALUMINA BRICKS
SAS M - 45	45	2.0	Ceramic	0.05	1300	33	FOR LYING OF 50% ALUMINA BRICKS
SAS M - SILL	50	2.0	Ceramic	0.05	1350	33	FOR LYING OF SILLIMANITE BRICKS
SAS M - 60	60	2.2	Ceramic	0.05	1350	34	FOR LYING OF 60% ALUMINA BRICKS
SAS M - 70	70	2.0	Ceramic	0.05	1350	35	FOR LYING OF 70% ALUMINA BRICKS
SAS M - 80	80	1.5	Ceramic	0.05	1400	37	FOR LYING OF 80% ALUMINA BRICKS
SAS M - 90	90	1.0	Ceramic	0.05	1800	38	FOR LYING OF 90% ALUMINA BRICKS

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS. THESE ARE OUR STANDARD PRODUCTS. HOWEVER, TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIREMENTS. SHELF LIFE: 12 MONTHS, TYPE OF SETTING: CERAMIC, PACKING: 25/50 KGS HDPE BAGS. INSTALLATION: TO BE MIXED WITH WATER AND APPLY AS PER SITE CONDITIONS.



Insulation bricks are manufactured as per Indian and international standards. Raw material base is Vermiculite, Diatomite, Mica, Kyanite, Bubble Alumina and other raw materials. Insulation bricks like low duty, medium duty, hot face, cold face, porous are available. High strength insulation bricks for aluminum and chemical industries are available.

## PRODUCT DATA - INSULATION BRICKS

BRAND	Al <sub>2</sub> O <sub>3</sub> % min	Thermal conductivity in K.cal/ m/ hr/oCo.14	Bulk Density Gm/cc min	Apparent Porosity % max	Cold Crushing Strength Kg/cm <sup>2</sup> min	Maximum Working Temp.°C min.°	Refractoriness (Pyrometric Cone Equivalent - Orton Cone) (oC)	Permanent Linear Change % at °C for 5 hours max	Raw Material
SAS-IRB500	25	0.14	0.475-0.53	80	7	1050	24	(-)1.5 at 950°C	MICA
SAS-IRB600	26	0.16	0.57-0.63	75	9	1050	24	(-)1.5 at 1000°C	MICA
SAS-IRB700	27	0.18	0.700	72	12	1050	26	(-)1.5 at 1000°C	MICA
SAS-IRBCF	29	0.19	0.75-0.80	70	15	1100	26	(-)1.5 at 1000°C	FIRE CLAY
SAS-IRBSIL	18	0.25	0.8-0.9	65	15	1100	30	(-)1.5 at 1100°C	SILICA
SAS-IRBHF	30	0.25	0.85-0.95	65	18	1200	27	(-)1.5 at 1100°C	FIRE CLAY
SAS-IRBHFR	35	0.30	1.0-1.1	60	40	1300	30	(-)1.5 at 1200°C	FIRE CLAY
SAS-IRBH5	18	0.40	1.1-1.2	55	80	1350	30	(-)1.5 at 1200°C	SILICA
SAS-IRBHFK	40	0.40	1.0-1.2	55	40	1400	32	(-)1.5 at 1200°C	ALUMINA

ALL THE ABOVE DATA PERTAINS TO STANDARD PRESSABLE SHAPES SUBJECT TO REASONABLE VARIATIONS. SIZE TOLERANCE WILL BE MAINTAINED AS PER INDIAN STANDARD.

BRICKS WITH PROPERTIES OF HIGHER VALUES AVAILABLE WHERE APPLICATIONS REQUIRE THE SAME.

TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIREMENTS.

## PRODUCT DATA - INSULATING CASTABLES

BRAND	Al <sub>2</sub> O <sub>3</sub> % (min.)	Fe <sub>2</sub> O <sub>3</sub> % (max.)	Max Service Temperature	Bulk Density (gm/cc) min (at 110 °C )	Cold Crushing Strength Kg/cm <sup>2</sup> (min.) After Drying at 110 °C	Refractoriness Under Load Ta °C (min.)	Grain Size	Thermal Conductivity (Kcal/m-hr- °C)
SAS-INSUL 5	30	9.50	1000	0.85	10-12	1250	0-5mm	0.10
SAS-INSUL 7	40	8.50	1100	0.85	12-14	1350	0-5mm	0.15
SAS-INSUL 9	42	8.50	1200	0.90	15-17	1400	0-5mm	0.25
SAS-INSUL 10	43	7.00	1300	1.25	18-20	1420	0-5mm	0.30
SAS-INSUL 11	45	3.11	1350	1.30	35-45	1400	0-5mm	0.31
SAS-INSUL 11 LI	45	1.50	1350	1.30	45-55	1400	0-5mm	0.34
SAS-INSUL 15	46	1.40	1400	1.60	80-90	1450	0-5mm	0.45
SAS-INSUL HT	46	1.30	1500	1.65	90-100	1480	0-5mm	0.46
SAS-INSUL 90	92	0.30	1800	1.60	70-100	1500	0-5mm	1.10

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS. THESE ARE OUR STANDARD PRODUCTS. SHELF LIFE: 9 MONTHS, TYPE OF SETTING: HYDRAULIC, PACKING: 25/50 KGS HDPE BAGS. INSTALLATION: RAMMING . INSTALLATION: RAMMING

Insulation castables are manufactured from high purity alumina insulating grog. Service temperature starts from 1100°C to 1800°C. Tailor made products can also be supplied as per customer requirements.





Our Low Cement Castables are available from 45% to 95% Alumina. They are manufactured from high purity aluminous raw material mix and Calcium Alumina Cement. These LC Castables are available from service temperature 1550°C to 1800°C. These products have high stability, better corrosion and erosion and good thermal shock resistance.

## PRODUCT DATA - LOW CEMENT CASTABLES

BRAND	Al <sub>2</sub> O <sub>3</sub> % (min.)	Fe <sub>2</sub> O <sub>3</sub> % (max.)	CaO% (max.)	Max Service Temperature °C	Bulk Density (gm/cc) min (at 110 °C)	Cold Crushing Strength Kg/cm <sup>2</sup> (min.) After Drying at 110 °C	Refract oriness °C (min.)	Grain Size	Permanent Linear Change % (max) At 800 °C/2 hrs.
SAS-LC40	40	2.00	2.3	1500	2.20	600	1250	0-5mm	+ 0.2
SAS-LC45	45	1.00	2.5	1550	2.30	700	1350	0-5mm	+ 0.2
SAS-LC50	50	1.50	2.5	1550	2.35	700	1400	0-5mm	+ 0.2
SAS-LC60	60	1.50	2.5	1600	2.60	750	1450	0-5mm	+ 0.2
SAS-LC70	70	1.50	2.0	1650	2.70	750	1430	0-5mm	+ 0.2
SAS-LC80	80	1.80	2.0	1700	2.80	800	1430	0-5mm	+ 0.2
SAS-LC85	85	1.50	2.0	1720	2.85	870	1800	0-5mm	+ 0.2
SAS-LC94	94	0.30	1.9	1750	3.00	950	1835	0-5mm	+ 0.2

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS. THESE ARE OUR STANDARD PRODUCTS.  
SHELF LIFE: 9 MONTHS, TYPE OF SETTING: HYDRAULIC, PACKING: 25/50 KGS HDPE BAGS. INSTALLATION: VIBRO CASTING, WATER ADDITION 5% APPROX  
TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS

## PRODUCT DATA - CONVENTIONAL CASTABLES

BRAND	Al <sub>2</sub> O <sub>3</sub> % (min.)	Fe <sub>2</sub> O <sub>3</sub> % (max.)	CaO % (max.)	Max Service Temperature	Bulk Density (gm/cc) min (at 110 °C)	Cold Crushing Strength Kg/cm <sup>2</sup> (min.) After Drying at 110 °C	Refractoriness °C (min)	Grain Size	Permanent Linear Change % (max) At 1100 °C/ 2 hrs.
SAS-CAST 1350	40	4.00	6	1350	2.00	260	1430	0-5mm	+ 0.3
SAS-CAST 1400	40	4.00	8	1400	2.10	360	1560	0-5mm	+ 0.3
SAS-CAST 1450	45	4.00	6	1450	2.10	250	1580	0-5mm	+ 0.3
SAS-CAST 1500	50	2.00	4	1500	2.15	380	1650	0-5mm	+ 0.3
SAS-CAST 1500S	50	1.50	5	1500	2.20	460	1665	0-5mm	+ 0.4
SAS-CAST 1600	60	1.90	5	1600	2.30	300	1750	0-5mm	+ 0.1
SAS-CAST 1600S	60	1.50	5	1600	2.15	450	1680	0-5mm	+ 0.4
SAS-CAST 1650	70	1.50	6	1650	2.50	350	1750	0-5mm	+ 0.3
SAS-CAST 1650S	80	1.80	6	1650	2.60	550	1800	0-5mm	+ 0.3
SAS-CAST 1700	80	1.50	5	1700	2.50	560	1760	0-5mm	+ 0.5
SAS-CAST 1750	88	1.1	5	1750	2.80	600	1800	0-5mm	+ 0.4
SAS-CAST 1750S	85	1.4	6	1750	2.70	620	1810	0-5mm	+ 0.3
SAS-CAST 1800	92	0.5	5	1800	2.75	520	1820	0-5mm	+ 0.2
SAS-CAST 1850	95	0.3	3	1850	2.80	340	1835	0-5mm	+ 0.3

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SHELF LIFE: 9 MONTHS, TYPE OF SETTING: HYDRAULIC, PACKING: 25/50 KGS HDPE BAGS. INSTALLATION: VIBRO CASTING, WATER ADDITION 8-12%.

TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.

Conventional Castables are suitable for low, moderate and high temperature applications from 1350°C to 1850°C. These are manufactured out of high purity alumina concrete and calcium alumina cement. They have high volume stability, good thermal shock resistance and excellent hot strength.

## PRODUCT DATA – MORTARS & CASTABLES FOR SLIDE GATE

BRAND	Al <sub>2</sub> O <sub>3</sub> % (min.)	Grading mm	Sintering Temperature °C	Type of Setting	Application
SAS-SGR 70K	70	0-0.5	1200	Ceramic	For joining ladle nozzle with well block
SAS-SGR 90K	90	0-0.5	1200	Chemical/Ceramic	For joining plate to nozzle
SAS-SGR 95H	95	0-4	1400	Hydraulic	For fixing well block to ladle

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS.

SHELF LIFE: 9 MONTHS, PACKING: 25/50 KGS HDPE BAGS.

TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.



Basic Monolithic like Mortars, Ramming Masses, Gunning Materials are available for wide applications in Steel Melting shops. These products are manufactured out of high purity Dead Burnt Magnesite.

## PRODUCT DATA - BASIC MORTARS

BRAND	MgO % (min.)	Cr2O3 % (min.)	SiO2 % (max.)	Grading mm	Sintering Temperature °C	Type of Setting	Remarks
SAS-CH 20	20	30	2.5	0-0.5	1300	Hydraulic	For Copper Industry
SAS-CTM	-	40	-	0-1	1400	Ceramic	Mortar for laying Chromite Bricks
SAS-CMM	35	22	-	0-1	1400	Ceramic	Mortar for laying Chrome Mag Bricks
SAS-MCM	60	15	-	0-1	1650	Ceramic	Mortar for laying Mag Chrome Bricks
SAS-DBMC	65	15	2.5	0-0.5	1600	Ceramic	For laying DBMC Bricks
SAS-MGM	85	-	7.5	0.05	1600	Ceramic	Mortar for laying Magnesite Bricks
SAS-MGM SPL	88	-	4.0	0.05	1600	Ceramic	For laying of bricks in glass tank regenerator checker

## PRODUCT DATA – BASIC RAMMING MASSES

BRAND	MgO % (min.)	Cr2O3 % (min.)	SiO2 % (max.)	Grading mm	Sintering Temperature °C	Type of Setting	Application Temp	Remarks
SAS-RAM MCX	70	7	-	0-5	800	Ceramic	1750	High Frequency Induction Furnace
SAS-PATCH MCX	75	8	-	0-2	800	Ceramic	-	Mag Chrome patching mass for worn out portion of Induction Furnace
SAS-RAM 84	84	-	6.5	0-5	1550	Ceramic	1750	Magnesite Ramming Mass for hot & cold repair of EAF
SAS-FET 84	84	-	8.0	0-5	1550	Ceramic	1750	Magnesite Fetting material for repair of furnaces operating on basic slag
SAS-RAM 86	86	-	5.5	0-5	1550	Ceramic	1750	Similar to SAS-RAM 84 but for better service life inside wall gunning
SAS-RAM 90	90	-	3.0	0-5	1550	Ceramic	1750	High strength ramming mass
SAS-RAM 95	95	-	2.0	0-5	1550	Ceramic	1750	High MgO with low silica ramming mass for ramming Tap-hole in L.D converters
SAS-MGTM 92	92	-	2.0	0-0.5	1600	Ceramic	1750	For laying High purity Magnesite bricks
SAS-MGTM 94	94	-	1.5	0-0.5	1650	Ceramic	1750	--do--
SAS-MGTM 95	95	-	1.0	0-0.5	1650	Ceramic	1750	--do--
SAS-MGTM 98	97	-	0.5	0-0.5	1650	Ceramic	1750	--do--

## PRODUCT DATA - BASIC GUNNING MATERIALS

BRAND	MgO % (min.)	SiO2 % (max.)	PLC at 1550 °C /2hrs (max)	Grading mm	Sintering Temperature °C	Type of Setting	Application Temp	Remarks
SAS-Tundish Spray Mix	65	24	-2.5	0-0.5	800	-	1600	Wall & bottom of tundish
SAS-Tundish Coat	80	7	-	0-2	-	-	1750	Tundish spray mix for wear lining
SAS-GUN 82	82	8	-2	0-3	-	Chemical	1750	Gunning Material for EAF
SAS-GUN 84	84	6.5	-2	0-3	-	Chemical	1750	Superior than GUN 82
SAS-GUN 90	90	4	-1.5	0-4	-	Chemical Or Ceramic	1850	Superior Gunning material of BOF/EAF
SAS-EBT FILL	85	6.5	-	0-5	-	-	-	For use in low capacity and high capacity EBTS mass for smooth opening
SAS-HOT PATCH	87	6.5	-	0-2 & 0-4	-	-	-	For LD and Ladle EAF & EOI
SAS-EBT FILL SPL	90	5	-	0-5	-	-	-	

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS.  
 SHELF LIFE: 9 MONTHS, PACKING: 25/50 KGS HDPE BAGS.  
 TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIREMENTS.



## PRODUCT DATA – ACID RESISTANT BRICKS & MORTAR

BRAND	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %	Alkalies %	Bulk Density Gm/cc min	Water Absorption %	Modulus of Rupture Kg/cm <sup>2</sup> min	Flexural Strength Kg/cm <sup>2</sup> min	Resistance to acid % max
SAS-AR25	25	67	1.50	5	2.30	2	400	130	1
Acid Resistant Mortars	Depending upon applications various types of mortars are available for example Furan based, sodium and potassium based, bitumen based etc are available.								

**ACID RESISTANT BRICKS (SAS AR25):** This type of Acid Resistant Bricks and tiles are generally available in the sizes of 230x115x75mm, 230x115x30mm, 230x115x20mm. However, the sizes can be manufactured as per customers requirement also. This product is complying Indian Standards for applications where low absorption and higher acid resistance are required. They have excellent resistant against wide range of chemicals except hydrofluoric acid. Also, they have high abrasion resistance, low wearing properties, High Thermal resistant to sudden change in temperature. Mostly these bricks can be used for lining of Acid and Alkali Storage Tank Farms, Demineralization plants and Water treatment plants, Chimney inside lining, FGD linings, Towers and Columns, Process Vessels and Tanks, Sewerage Treatment Plants and Lines, Industrial Flooring and Bund Areas, Chimney and Flue Gas Linings, Hoppers and Chute.

**ACID RESISTANT MORTARS:** Depending upon applications various types of mortars are available for example Furan based, sodium and potassium based, bitumen based etc are available. Details can be submitted with quotation.

ALL THE ABOVE DATA PERTAINS TO STANDARD PRESSABLE SHAPES SUBJECT TO REASONABLE VARIATIONS. SIZE TOLERANCE WILL BE MAINTAINED AS PER INDIAN STANDARD. BRICKS WITH PROPERTIES OF HIGHER VALUES AVAILABLE WHERE APPLICATIONS REQUIRE THE SAME. TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS. SHELF LIFE: 9 MONTHS, PACKING: 25/50 KGS HDPE BAGS. TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.

## PRODUCT DATA – SILICA RAMMING MASS (WHITE)

BRAND	SiO <sub>2</sub> % (Min)	Fe <sub>2</sub> O <sub>3</sub> % (Min.)	Al <sub>2</sub> O <sub>3</sub> % (Min.)	Grain Size	Service Temperature	Properties	Application
SAS SRM	98	0.5	0.25	0-5mm	1700°C	With Boric Acid	Induction Furnace Lining
SAS SRMB	98	0.5	0.25	0-5mm	1700°C	Without Boric Acid	Induction Furnace Lining

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS. SHELF LIFE: 9 MONTHS, PACKING: 25/50 KGS HDPE BAGS. TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.

Our Silica Ramming Mass is manufactured out of super quality white quartzite crystalline mineral with Silica content upto 99.5 % which is extracted from the mines directly. It is processed under high supervision and passed through quality measures at every stage of production. Our product does not change its stability and remains constant during the running furnace where temperature goes upto 1750°C. Acidic Ramming Mass in steel melting through Induction Furnace is essential because of its vital property to with stand warm stuns without building up any breaks because of intruded on control supply which is the situation all through the steel industry. We have stepped up with regards to create acidic ramming mass of astounding silica Quartz having substantial thickness. We are manufacturing Silica Ramming Mass for furnace with capacity 1 to 40 tones. This product is low Iron, Long lining life, long shelf life, Less breakage in the furnace, Consistency in every batch, Proper sintering because of the perfect sized granules.





## PRODUCT DATA – TUNDISH COVERING (RADEX)

BRAND	SiO <sub>2</sub> % (Min)	Fe <sub>2</sub> O <sub>3</sub> % (Max.)	Al <sub>2</sub> O <sub>3</sub> % (Min.)	Moisture % (Max.)	Service Temperature	Bulk Density (gm/cc)	Application
SAS TC	10	1.0	70	2	1650°C	0.80	Thermal Insulation to minimize Temperature Drop

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS.

SHELF LIFE : 6 MONTHS , PACKING : 12 KGS HDPE BAGS.

TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.

## PRODUCT DATA – CASTING POWDER

BRAND	SiO <sub>2</sub> % (Min)	CaO % (Min.)	C % (Max.)	Al <sub>2</sub> O <sub>3</sub> % (Max.)	Melting Point	Basicity (Cao/SiO <sub>2</sub> )	Particle Size
SAS CC	23	21	22	10	1080°C	0.85 +/- 0.05	90 micron (80%)

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS.

SHELF LIFE : 6 MONTHS , PACKING : 25 KG IN POLY LINED HDPE BAG.

TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.

## PRODUCT DATA – NOZZEL FILLING COMPOUND

BRAND	SiO <sub>2</sub> % (Min)	Cr <sub>2</sub> O <sub>3</sub> % (Min.)	C % (Max.)	Mesh Size	Application
SAS NFC	76	18	1.5	(-16 to +150) BSS	Increases slid gate life

ALL THE ABOVE DATA PERTAINS TO STANDARD PRODUCTS AND IS SUBJECT TO REASONABLE VARIATIONS.

SHELF LIFE : 6 MONTHS , PACKING : 25 KG IN POLY LINED HDPE BAG.

TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.

## PRODUCT DATA – BASIC REFRACTORY BRICKS

BRAND/PRODUCT	MgO %	SiO <sub>2</sub> %	Cr <sub>2</sub> O <sub>3</sub> %	Apparent Porosity %	Bulk Density (gm/cc)	Cold Crushing Strength Kg/cm <sup>2</sup>	RUL ta °C
SAS DENMAG65 (Dense Magnesite Chrome Bricks)	65.0	5.0	12.0	20.00	2.92	300	1600
SAS DMC65 (Direct Bonded Magnesite Chrome Bricks)	65.0	3.0	12.0	20.00	2.95	350	1650
SAS CHROMAG30 (Dense Chrome Magnesite Bricks)	30.0	-	15.0	25.00	2.85	200	1550
SAS MAGB80 (Burnt Magnesite Bricks)	80.0	-	-	23.00	2.80	350	1500
SAS MGB50 (Burnt Magnesite Bricks)	50.0	-	-	21.00	2.70	400	1650

ALL THE ABOVE DATA PERTAINS TO STANDARD PRESSABLE SHAPES SUBJECT TO REASONABLE VARIATIONS.SIZE TOLERANCE WILL BE MAINTAINED AS PER INDIAN STANDARD.

BRICKS WITH PROPERTIES OF HIGHER VALUES AVAILABLE WHERE APPLICATIONS REQUIRE THE SAME.

TAILOR MADE PRODUCTS CAN ALSO BE SUPPLIED AS PER CUSTOMERS REQUIRNMANTS.

Fired Magnesite Bricks up to 85% MgO is suitable for use in backup lining of Electric Arc Furnace and Steel Ladles. Also used in EAF sub hearth and working lining and hot metal mixer wear out lining. Direct Bonded Magnesite Chrome Bricks are based on high grade magnesite chrome sinter and fired at temperature of 1750 °C.

This product has good corrosion, erosion and thermal shock resistant they are suitable for Copper Smelters, Lead and Zinc Furnaces.



THIS PRODUCT IS DESIGNED FOR QUICK INSTALLATION AND PERFECT FOR HOT AND EMERGENCY REPAIRS DUE TO HIGH PLASTICITY. WE RECOMMEND PNEUMATIC RAMMING OF PLASTICS.

## PRODUCT DATA – PLASTIC REFRACTORIES

BRAND	Al <sub>2</sub> O <sub>3</sub> % (min.)	Fe <sub>2</sub> O <sub>3</sub> % (max.)	Type of Setting	Max Service Temperature	Bulk Density (gm/cc) min (at 110 °C)	Cold Crushing Strength Kg/cm <sup>2</sup> (min.) After Drying at 110 °C	Liquid Binder (%) approx	Grain Size	Permanent Linear Change % (max) At 1300 °C/ 2 hrs.
SAS-PLASTOCAST 1400	45	1.20	Chemical	1400	2.40	200	12	0-3mm	+/- 1.0
SAS-PLASTOCAST 1450	55	1.30	Chemical	1450	2.45	220	11	0-3mm	+/- 1.0
SAS-PLASTOCAST 1500	60	1.50	Chemical	1500	2.50	250	10	0-3mm	+/- 1.0
SAS-PLASTOCAST 1600	80	1.50	Chemical	1600	2.60	300	9	0-3mm	+/- 1.0
SAS-PLASTOCAST 1650	85	1.00	Chemical	1650	2.65	330	8	0-3mm	+/- 1.0
SAS-PLASTOCAST 1700	90	1.00	Chemical	1700	2.70	350	8	0-3mm	+/- 1.0
SAS-PLASTOCAST 1750	92	0.90	Chemical	1750	2.75	370	7	0-3mm	+/- 1.0
SAS-PLASTOCAST 1800	95	0.30	Chemical	1800	2.80	400	7	0-3mm	+/- 1.0

THE PRODUCT IS SUPPLIED IN TWO COMPONENTS: GRANULAR MATERIAL IN 50 KGS HDPE BAGS AND LIQUID BINDER IN 35 LITERS CAPACITY POLYTHENE JAR (POWDER: LIQUID = 90:10) BOTH THE MATERIALS ARE TO BE MIXED AT THE TIME OF APPLICATION AS ABOVE.

NATURE OF BOND: CHEMICAL /CERAMIC SHELF

INSTALLATION METHOD: PNEUMATIC RAMMING OF PLASTICS.

LIFE UNDER COVERED STORAGE, FREE OF MOISTURE: 9 MONTHS

PRODUCT SETTING: CHEMICAL

PRECAUTION FOR SAFETY USE HAND GLOVES, NOSE MASK AND GOGGLES DURING APPLICATION THE ABOVE DATA IS AVERAGE OF PRODUCTION TEST RESULTS AND THEY SHOULD NOT BE USED AS GUARANTEED VALUES. IN ADDITION TO THE ABOVE, TAILOR-MADE VARIANTS CAN BE SUPPLIED TO SUIT CUSTOMER'S REQUIREMENT.