

ABS Refractories Pvt. Ltd.

(A Unit of Mittal Group)

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www.absrefractories.com

www.mittal-group.com

About us

Since 1986 we are meeting the requirements of Iron and Steel Industries, Cement Industries, Sugar Industries, Fertilizer and Chemical Industries, Petrochemical Industries, Industrial Furnaces/Boilers, Thermal Power Stations, Ordnance Factories, Ceramic Industries etc.

Within our wide customer base in India and abroad we have a reputation of manufacturing high quality yet economical products keeping customer consideration in focus.

Our wide range of products include Fireclay and High Alumina Bricks, Insulation Bricks, Refractory Bed Supports, Castables, Mortars, Ramming and Gunning Masses, etc confirming with ASTM, DIN, GOST & ISI specifications.

Quality Policy

We are committed to manufacture and supply high quality yet economical products to all our customers. With our teamwork we go all out to meet our customer's requirements by attaining excellence at all levels of production activities. By stringently adhering to quality norms we lead to continuous improvement of products, process costs, effectiveness and productivity. All quality control procedures and developmental testings are carried out by Ceramic Engineers in our fully equipped Laboratory.

Our success over the years has been built on the principles of Quality, Service and Reliability.

We have already been awarded with the ISO 9001:2000 certificate by TUV SUD Management Services, GmbH in 2004.



ABS Refractories Private Limited

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(A Mittal Group of Companies)



Plant Capacity

1. Dense Bricks – 1300 MT/Month
2. Insulation Bricks – 1 Lac pcs/ Month
3. Castables – 1000 MT/Month

Infrastructures

S. No.	Description	Capacity Per Machine	No. of machines Installed
1	Millhouse		
A	Crushing & Grinding unit	4 MT/Hrs.	3 Nos.
B	Pulverizer	4 MT/Hrs	1 Nos.
C	BallMill	1 MT/Hrs	1 Nos.
D	Counter Current Intensive Mixer	4 MT/Hrs	1 Nos.
E	R.T. Mixer	4 MT/Hrs	1 Nos.
F	Cooper Type Mixer Machine	300 Kg/Hrs,	1 Nos.

Infrastructures (Contd.)

S. No.	Description	Capacity Per Machine	No. of machines Installed
2	Pressing/ Shaping		
A	Pug Mill	20 MT/Hrs.	2 Nos.
B	Friction Screw Press 150T	15 MT/Hrs	5 Nos.
C	Maxiberator/ Vibratory Press	5 MT/Hrs	1 Nos.
D	T.T. Press	10 MT/Hrs	1 Nos.

Infrastructures (Contd.)

S. No.	Description	Capacity Per Machine	No. of machines Installed
3	Firing		
A	Tunnel Kiln	25 MT/Hrs.	2 Nos.
B	Chamber kiln	6 MT/Hrs	2 Nos.
C	Boogie Kiln	6 MT/Hrs	1 Nos.
D	D.D. Kiln	175 MT/Cycle	7 Nos.

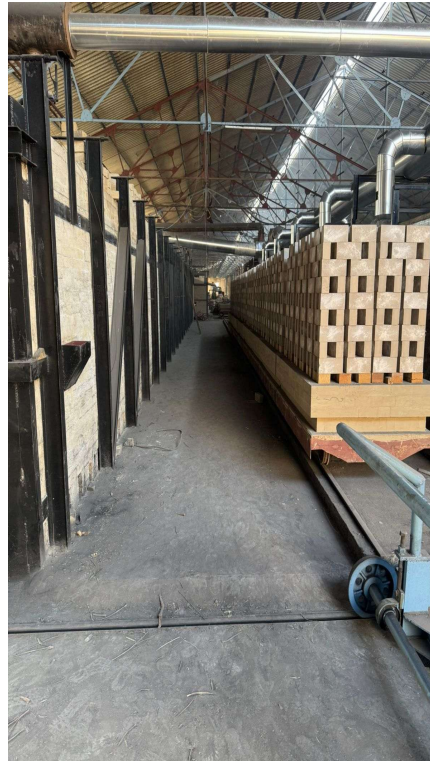


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ABS Refractories – New Investment



1. New Tunnel Kiln– 1550 Deg C– Completed
2. Insulation Brick Cutting Machines–4000 pcs/Shift



3. Additional Plan : A. Electric Screw Press 315 MT– 2 nos.
B. Silos and Auto Batching– 2 Sets for Monolithic Plant and Brick Plant



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ABS Refractories – New Investment



4. Another new Tunnel Kiln- 1550 Deg C, will be ready by September, 2026.



5. Putting 2 Driers to increase drying time for Insulation Bricks



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ABS Refractories – New Investment



6. New Automated Brick making facilities – for Speciality Refractory Raw Materials





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ABS Refractories – New Investment



Mittal Group taken over Hofmann Engineering , Ahmedabad
A Ceramic Unit. Machineries are shifted to Katni New Building at
ABS Refractories Campus.



Plant will be ready by end of August, 2026.

Present Plant Capacity –300 TPA High Alumina Products



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ABS Refractories – Laboratory Equipments

List of Equipments



S. No.	Name of Equipments	Capacity Per Machine	No. of machines Installed	Qty.
1	PCE	STD Cone 37(1820°C)	Assembled	2
2	RUL Furnace	Upto 1785°C	Assembled	2
3	Vibrating Machine for Cement Testing		Aimil	1
4	Vicat Apparatus	0-50 mm	Aimil	1
5	CCS Machine	0-100 Ton	Aimil	2
6	P.L.C.A.R Furnace	Upto 1450°C	Combine	3





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ABS Refractories – Laboratory Equipments

List of Equipments (Contd.)



S. No.	Name of Equipments	Capacity Per Machine	No. of machines Installed	Qty.
7	Test Sieves	5mm - 320 mm	Indian Standard	8
8	Physical Balance	10 to 200 gms.		1
9	Muffle Furnace	1150°C		3
10	Optical Pyrometer	Up to 2000°C	Toshniwal Brothers	1
11	Thermal Conductivity Apparatus	1000°C	Bien Artium, Kolkata	2
12	Reversible Thermal Expansion Test Apparatus		Bien Artium, Kolkata	1



List of Equipments

S. No.	Name of Equipments	Capacity Per Machine	No. of machines Installed	Qty.
1	PCE	STD Cone 37(1820°C)	Assembled	2
2	RUL Furnace	Upto 1785°C	Assembled	2
3	Vibrating Machine for Cement Testing		Aimil	1
4	Vicat Apparatus	0-50 mm	Aimil	1
5	CCS Machine	0-100 Ton	Aimil	1
6	P.L.C.A.R Furnace	Upto 1450°C	Combine	1

List of Equipments (Contd.)

S. No.	Name of Equipments	Capacity Per Machine	No. of machines Installed	Qty.
7	Test Sieves	5mm - 320 mm	Indian Standard	
8	Physical Balance	10 to 200 gms.		1
9	Muffle Furnace	1200°C		1
10	Optical Pyrometer	Upto 2000°C	Toshniwal Brothers	1
11	Thermal Conductivity Apparatus	1200°C	Bien Artium, Kolkata	1
12	Reversible Thermal Expansion Test Apparatus		Bien Artium, Kolkata	1



ABS Refractories Private Limited

ABS Refractories – Product Range



1. Fireclay and High Alumina Bricks (32–90% Alumina)
2. Hot and Cold Face Insulation Bricks
3. High Temperature Insulation Bricks (IFB 23 to IFB 30 Grade)
4. Acid Resistant Bricks (Grade I & II)
5. Dense Conventional Alumina Castables
6. Insulation Castables
7. Low Cement Castables
8. Ultra Low Cement Castables
9. Refractory Bed Supports (High, Medium & Low Purity)
10. Alumina Balls



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ABS Refractories – Fired Shaped Products

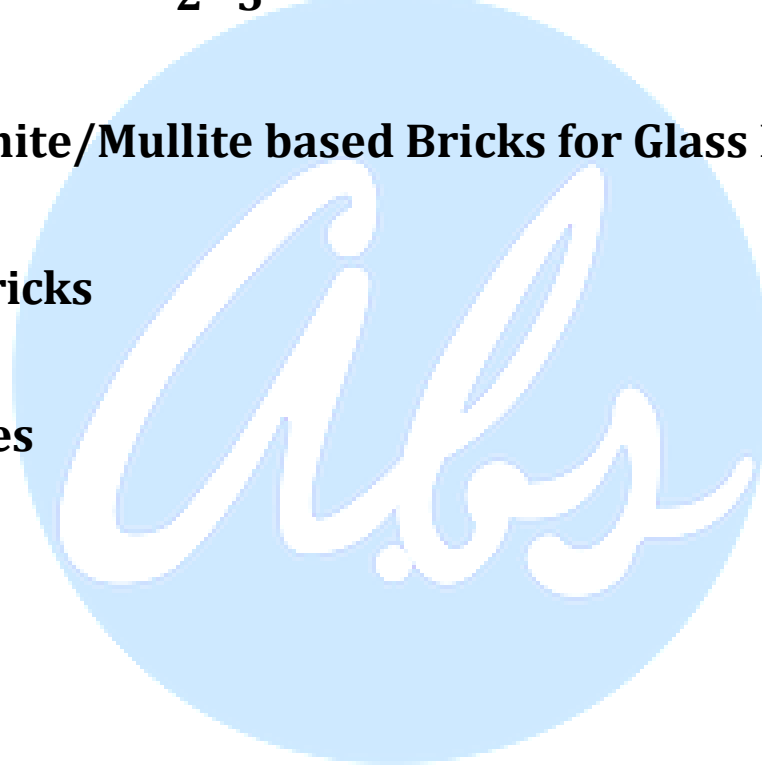


Major Products

- **Fireclay and High Alumina Bricks(32-95% Al_2O_3)**
- **Hot Face and Cold Face Insulation Bricks**
- **Acid Resistant Bricks (Grade I&II)**
- **Dense Alumina Castables (40-90% Al_2O_3)**
- **Insulation Castables**
- **Self-flow Castables**
- **Ultra Low and Low Cement Castables**
- **Refractory Bed Supports(High, Medium & Low purity)**
- **Alumina Ramming Masses (55-85% Al_2O_3)**
- **Basic Ramming Masses(55-90% MgO)**
- **Basic Gunning Masses**
- **Al_2O_3 and MgO based Mortars**

Special Products

- **85% Phosphate bonded Al_2O_3 Bricks for Aluminum Holding Furnaces**
- **Zirconia/Sillimanite/Mullite based Bricks for Glass Plants**
- **Spinel Bonded Bricks**
- **AFC Plastic Masses**



Fire Clay & High Alumina Bricks

BRAND	ABS/F36	ABS/F40	ABS/HA42 D	ABS/45	ABS/HA/45	ABS/HA55	ABS/HA59	ABS/HA62
Al ₂ O ₃ min	35%	40%	42%	45%	45%	55%	59%	62%
Fe ₂ O ₃ max	3%	2.5%	1.5%	3.5%	2%	3.5%	4%	1.5%
BD(g/cc)	2.15min	2.20min	2.25min	2.25min	2.25min	2.40min	2.45min	2.50min
AP	22%max	22%max	18%max	22%max	21%max	23% max	23%max	18%max
CCS (Kg/cm ²)	350min	350min	500min	400min	350min	450min	450min	600min
PLCAR(%) max.	±1 at 1350°C/3hrs	±0.80 at 1450°C/3hrs	±0.5 at 1450°C/3hrs	±1 at 1400°C/3hrs	±0.80 at 1450°C/3hrs	±1.5 at 1450°C/3hrs	±1.5 at 1450°C/3hrs	±0.50 at 1500°C/2hrs
RUL (Ta)(min.)	1350°C	1450°C	1480°C	1400°C	1450°C	1420°C	1440°C	1500°C
PCE Orton	31(1683°C) min.	33(1743°C) min.	34(1763°C) min.	32(1717°C) min.	33(1743°C) min.	34(1763°C) min.	34(1763°C) min.	36(1804°C) min.

Fire Clay & High Alumina Bricks

BRAND	ABS/HA70	ABS/CE70	ABS/HA70	ABS/HA80	ABS/PH85	ABS/HA88	ABS/HA90	ABS/HA95
Al ₂ O ₃ min	70%	70%	70%	79%	85%	88%	90%	95%
Fe ₂ O ₃ max	3%	1.5%	2.5%	1.5%	1.5%	1.20%	1.30%	0.30%
P ₂ O ₅					1.5% min.			
BD(g/cc)	2.60min	2.55min	2.53min	2.70min	2.75min	2.80min	2.90min	3.00min
AP	23%max	22%max	23%max	18%max	18%max	18%max	18%max	18%max
CCS (Kg/cm ²)	600min	600min	600min	750min	750min	750min	800min	600min
PLCAR(%) max.	±2 at 1500°C/2hrs	±2 at 1500°C/2hrs	±2 at 1500°C/2hrs	±1 at 1500°C/2hrs	±1 at 1550°C/2hrs	±1 at 1550°C/2hrs	±0.60 at 1550°C/2hrs	±0.50 at 1600°C/2hrs
RUL (Ta) min.	1460°C	1500°C	1480°C	1540°C	1540°C	1560°C	1580°C	1650°C
PCE Orton	+37(1820°C)) min.	+37(1820°C) min.	+37(1820°C)) min	37(1820°C) min	37(1820°C) min	37(1820°C) min	38(1835°C) min	38(1835°C) min

Insulating Bricks

BRAND	ABS/HFK-45	ABS/HFK-60	ABS/HFK-75
Al ₂ O ₃ min	45%	60%	72.75%
Fe ₂ O ₃ max	2%	1%	0.50%
BD(g/cc)	2.25max	2.45max	2.55max
CCS(Kg/cm ²)	350min	600min	600min
PLCAR(%)	±0.80 at 1450°C/3hrs	±0.50 at 1600°C/2hrs	±0.30 at 1600°C/2hrs
PCE(Orton)	33(1743°C)		
Thermal Conductivity	0.97 Kcal/m/hr/°C	1.23 Kcal/m/hr/°C	1.24 Kcal/m/hr/°C
Kcal/m/hr/°C)at 800°C			
Max Service Temp	1450°C	1650°C	1650°C

Acid Resistance Bricks

	ABS/AR-I	ABS/AR-II
BRAND		
Al₂O₃max	20-30%	20-30% min.
Fe₂O₃max	1.5%	1.5%
SiO₂min	60-70%	60% to 70%
Flexural strength (Kg/cm²)	75min	70min
CCS(Kg/cm²)	750min	500min
Resistance to acid	1.5%	4%
Water absorption(%)	2% max	3% max

Dense Alumina Castable

BRAND	ABS/FRS40	ABS/FRS45	ABS/FRS70	ABS/WK-50	ABS/WC-60	ABS/WA-90
Al₂O₃ min	40%	45%	70%	50%	60%	90%
Fe₂O₃ max	4.00%	4.00%	5.00%	1.50%	1.00%	0.80%
BD(g/cc)(110oC/24hrs)	2.10 min	2.20 min	2.50 min	2.10 min	2.20min	2.75 min
CCS(Kg/cm²)						
(110oC/24hrs)	250 min	400 min	350 min	350 min	350 min	600 min
(800oC/24hrs)				280 min	280 min	430 min
(1100oC/3 hrs)			450 min	220 min	230 min	330 min
(1500oC/3hrs)				500 min	520 min	650 min
PLCAR	±1.00%	±1.00%	±1.00%	±1.00%	±1.5%	±1.00%
Max Service Temp	1300oC	1400oC	1450oC	1500oC	1600oC	1750oC
Max Grain Size	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm
PCE (Orton)	20	23	31(1683oC)min	30(1665oC)min.	31(1683oC)min.	37(1820oC)min.

Insulating Castable

BRAND	ABS/IC-33	ABS/IC-35	ABS/IC-40	ABS/IC-41	ABS/IC-43	ABS/IC-44	ABS/IC-45
Al₂O₃ min	33.0%	35.0%	40.0%	41.0%	43.0%	44.0%	45.0%
Fe₂O₃ max	8.5%	3.5%	3.5%	2%	1.5%	1.5%	1.5%
BD(g/cc)(110°C/24hrs)	0.85 max	1.25 max	1.60 max	1.20 max	1.25 max	1.50 max	1.60 max
CCS(Kg/cm²)							
(110°C/24hrs)	12 min	35 min	80 min	30 min	45 min	80 min	110 min
(800°C/3 hrs)	4 min	25 min	60 min	25 min	30 min	40 min	65 min
(1100°C/3 hrs)	6 min	25 min	60 min	25 min	30 min	40 min	65 min
(1350°C/3hrs)		40 min	70 min	35 min	50 min	45 min	80 min
PLCAR (1350°C/3 hrs)	±1.0%	±1%	±1.0%	±1%	±0.90%	±0.08%	±0.60%
Thermal Conductivity	0.19	0.32	0.45	0.35	0.40	0.45	0.50
(Kcal/m/hr/°C) at 800°C							
Max Service Temp	1100°C	1300°C	1350°C	1350°C	1350°C	1400°C	1400°C
Max Grain Size	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm
PCE (Orton)	14	14	16	16	16	16	15

Self Flow Castables

BRAND	ABS/SF-45	ABS/SF-70
Al₂O₃ min	43%	68%
Fe₂O₃ max	1.00%	1.5%
BD(g/cc)(110°C/24hrs)	2.20 min	2.60 min
CCS(Kg/cm²) (110°C/24hrs)	250 min	300 min
(1100°C/3 hrs)	500 min	750 min
(1550°C/3hrs)	700 min	800 min
PLCAR (1550°C/3 hrs)	±1.00%	±0.80%
Max Service Temp	1550°C	1600°C
Max Grain Size	6 mm	6 mm
PCE (Orton)	32(1717°C) min.	36(1804°C) min.

Ultra Low Cement Castables

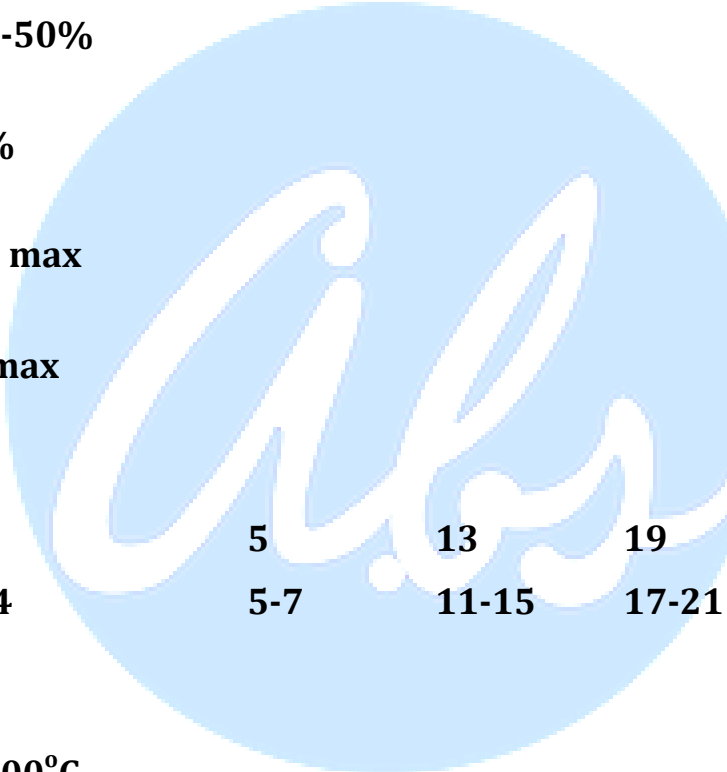
BRAND	ABS/ULC-45	ABS/ULC-2K 60	ABS/ULC-MR-70	ABS/ULC-M-80
Al₂O₃ min	45%	60%	70%	80%
Fe₂O₃ max	1.00%	1.50%	1.50%	1.80%
BD(g/cc)(110°C/24hrs)	2.35 min	2.60 min	2.70 min	2.90 min
CCS(Kg/cm²)				
(110°C/24hrs)	375 min	400 min	425 min	450 min
(800°C/3 hrs)	800 min	800 min	800 min	800 min
(1100°C/3 hrs)	825 min	825 min	900 min	1000 min
(1500°C/3hrs)	900 min	900 min	1000 min	1200 min
PLCAR (1500°C/3 hrs)	±0.70%max	±0.70%	±0.70%	±0.80%max
Max Service Temp	1550°C	1600°C	1650°C	1700°C
Max Grain Size	6 mm	6 mm	6 mm	6 mm
PCE (Orton)	32(1717°C)	36(1804°C)	36(1804°C)	37(1820°C)
Feature & Setting	Ultra Low Cement Hydraulic	Ultra Low Cement Hydraulic	Ultra Low Cement Hydraulic	Ultra Low Cement Hydraulic
Installation technique	Vibration casting	Vibration casting	Vibration casting	Vibration casting

Refractory Bed Support (High Purity)

BRAND	ABS/HAB							
Al₂O₃ min	99%							
Fe₂O₃ max	0.30%							
Individual Ball density(Kg/lit)	3.20 min							
Apparent Porosity (%)	10 max							
Water absorption (%)	4 max							
Physical properties								
Nominal size (mm)	3	6	13	19	25	37	50	
Size range (mm)	2-4	5-7	11-15	17-21	23-27	35-39	47-53	
Bulk Density (Kg/lit) min	1.85	1.85	1.80	1.80	1.70	1.65	1.65	
Point load (Kg) min	75	150	400	800	1000	1500	2000	
Max Service Temp	1800°C							
PCE (Orton)	38 (1835°C)							

Refractory Bed Support (Medium Purity)

BRAND	ABS/MAB			
Al₂O₃	45-50%			
Fe₂O₃ max	2%			
Apparent Porosity (%)	12 max			
Water absorption (%)	4 max			
Physical properties				
Nominal size (mm)	3	5	13	19
Size range (mm)	2-4	5-7	11-15	17-21
Point load (Kg)				
Max Service Temp	1400°C			
PCE (Orton)	32			



Refractory Bed Support (Low Purity)

BRAND **ABS/LAB**

Al₂O₃ **30%**

Fe₂O₃ max **2%**

**Apparent
Porosity (%)** **2 max**

**Water absorption
(%)** **0.5 to 1 max**

**Physical
properties**

**Nominal size
(mm)** **13**

Size range (mm) **11-15**

Point load (Kg)

Max Service Temp **1300°C**

PCE (Orton) **23**

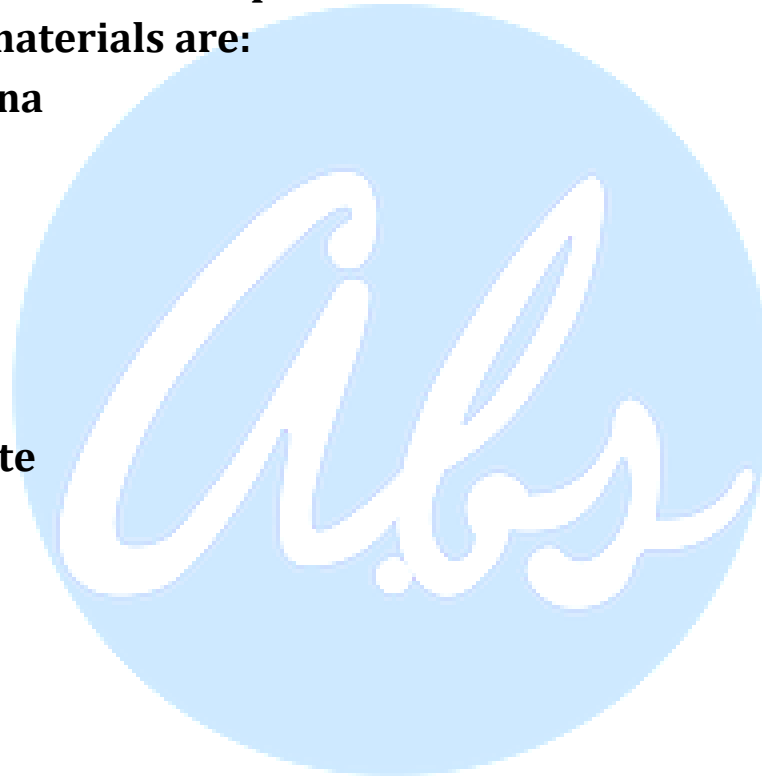


Major Raw Material Used

Depending on the type and nature of product we use a wide variety of raw materials.

Some of the major raw materials are:

- **White Fused Alumina**
- **Calcined Alumina**
- **Technical Alumina**
- **Calcined Bauxite**
- **Calcined Diaspore**
- **Reactive Alumina**
- **Calcined Pyrophyllite**
- **Quartz powder**
- **Microsilica**
- **Kyanite**
- **China Clay**
- **Ball Clay**
- **Non Plastic Clay**
- **Plastic Clay**
- **Low Fusion Clay**



Customer

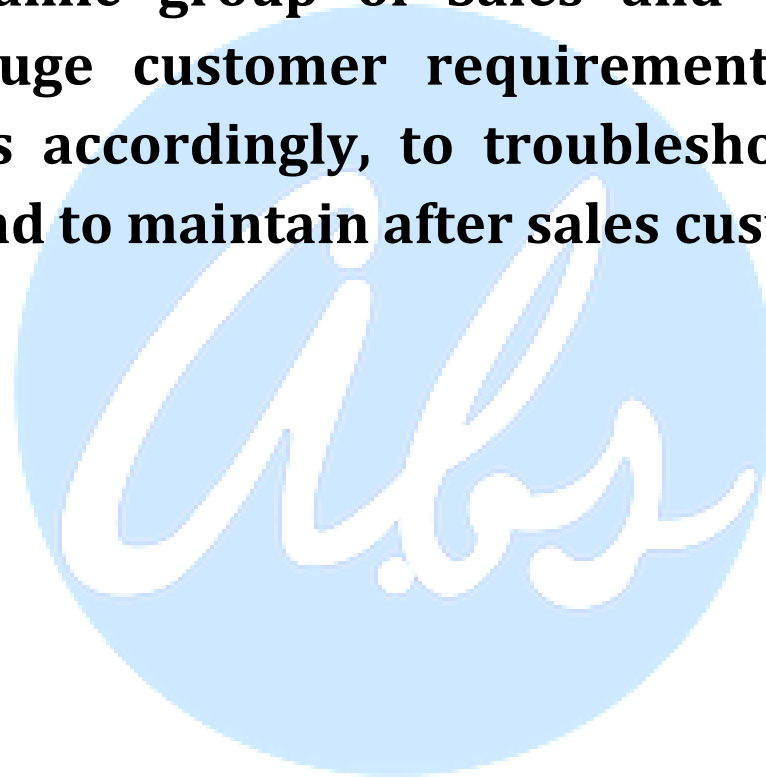


TATA STEEL



Customer Support

We have a dynamic group of Sales and Technical Service personnel to gauge customer requirements, design and/or develop products accordingly, to troubleshoot at site as and when required and to maintain after sales customer relations.



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