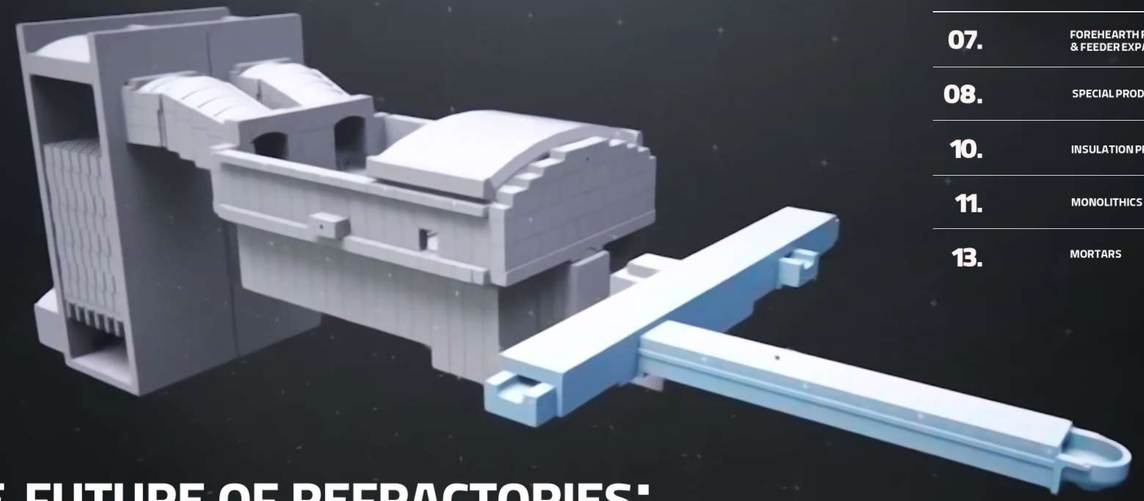


THE FUTURE OF REFRACTORIES: SUSTAINABLE, INNOVATIVE, EFFICIENT

- Mahaam Refractory is a world-class manufacturing industry committed to provide quality products and services various industries especially to Glass industries.

  We are the future of refractory solutions which will cater to your customized needs and wants.

  You can be a part of our refractory evolution journey as well.

  We as a company is deeply committed to the environmental cause by reducing our carbon neutrality and circulating at the same time. We understand our role and responsibility in these crucial challenges.

  The high-tech machine tools and solutions along with our unique cost structures helps us to give us a competitive edge over our competitors.

  Our strong distribution network and customer services goes hand in hand to provide a smooth experience to our customers.

  We believe that our business needs to be highly innovative in order to be able to maintain a healthy relationship with users. We are duly obliged for it.

  We provide the future proof refractory solutions.

  Benefits of our quality control products are -

  1. Improve product quality
  2. Reduced cost
  3. Increased productivity
  4. Enhanced customer satisfaction
  5. Greater competitiveness

  We are working in synchronization with poka-Yoke lean tool which covers -

  1. Prevention eliminate the issues
  2. Detection in process - catch errors during the process itself.
  3. Detection after mistake - detect defects before they move to next level.

ALUMINO-SILICATE & ANDALUSITE BASED. PRESSED PRODUCTS: BRICKS & SQUARE BLOCKS

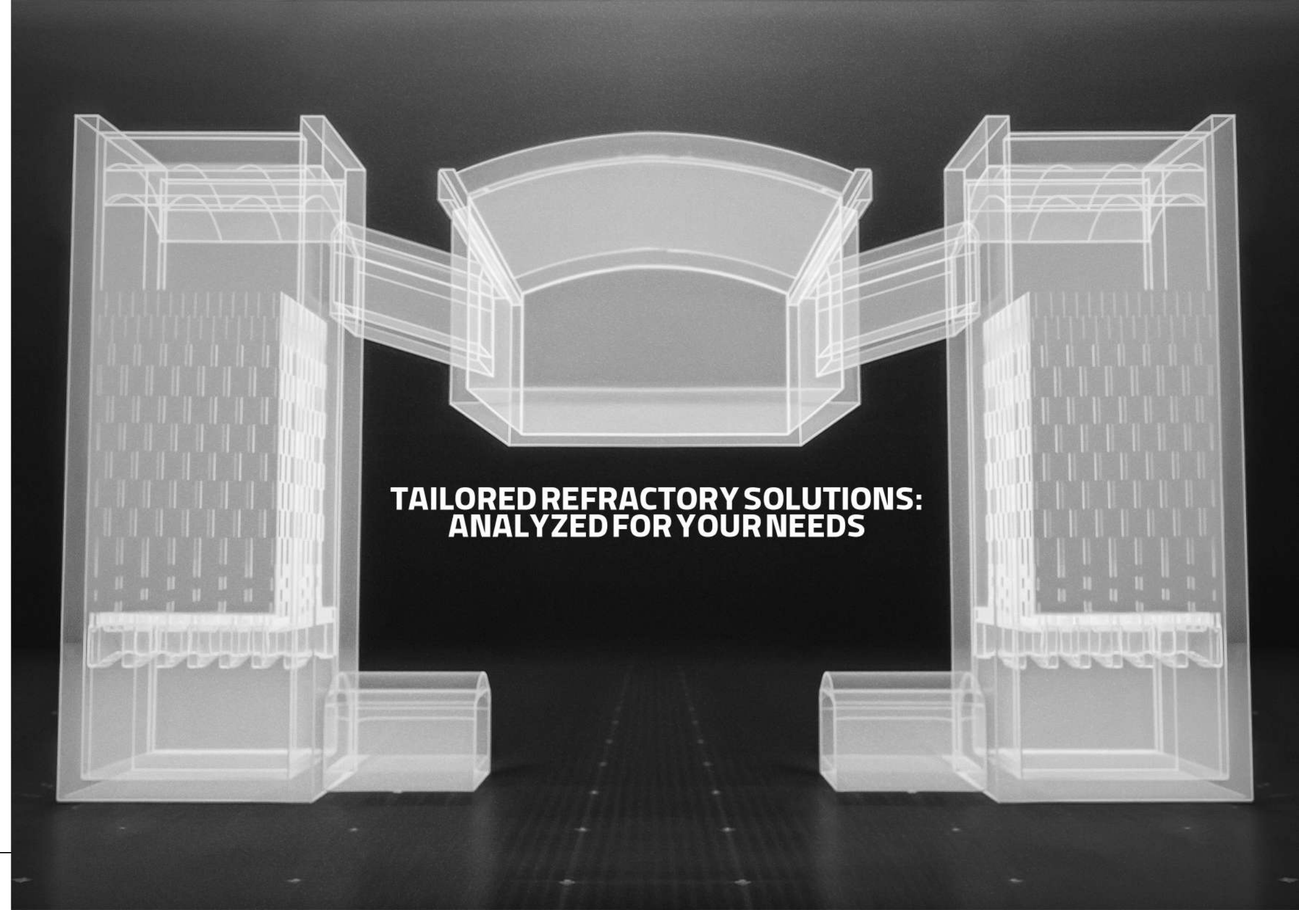
	STANDARD PRODUCTS			DENSE PRODUCTS				EXCESSIVE DENSE PRODUCTS		
MR Quality	MR-40D	MR-42D	MR-62R	MR-45D	MR-SILD	MR-62D	MR-65D	MR-SILDS	MR-62DS	MR-65DS
Al_2O_3 (%)	40.0	42.0	62.0	45.0	58.0	62.0	67.0	59.0	62.0	67.0
Fe_2O_3 (%)	2.0	2.0	1.5	1.2	1.0	0.8	0.8	0.8	0.8	0.7
SiO_2 (%)	56.0	53.0	34.0	50.0	39.0	35.0	30.0	38.0	36.0	31.0
B.D. gm/cc	2.15	2.20	2.45	2.30	2.45	2.50	2.55	2.50	2.55	2.60
A.P. (%)	20	18	18	16	18	17	18	15	15	15
C.C.S. kg/cm²	400	400	450	500	500	600	600	700	700	800
R.U.L. ta°C	1400	1420	1570	1480	1600	1620	1640	1620	1650	1680
P.C.E Orton	30	31	36	33	36	36	36	36	36	36
R.T.E. (%)	0.65	0.60	0.60	0.60	0.60	0.55	0.65	0.60	0.62	0.62
T.C.w/m°K	1.10	1.20	1.73	1.30	1.68	1.78	1.88	1.74	1.83	1.92
Mortar Recommended	MR-40M	MR-40M	MR-62M	MR-45M	MR-SILM	MR-62M	MR-65M	MR-SILM	MR-62M	MR-65M
Typical Application	Regenerator walls etc.	Bottom blocks, Regenerator walls etc.	Bottom blocks, Regenerator walls etc.	Rider Arch, Bottom Blocks etc	Regenerator walls, Packing etc.	Regenerator walls, Crown, Packing etc.	Regenerator walls, Crown, Packing etc.	For severe corrosion areas	For severe corrosion areas	For severe corrosion areas

ALUMINO-SILICATE & ANDALUSITE BASED. VIBRO-CAST PRODUCTS: BLOCKS & SHAPES

	STANDARD PRODUCTS			DENSE PRODUCTS				EXCESSIVE DENSE PRODUCTS		
MR Quality	MR-45 CAST	MR-SILCAST	MR-62 CAST	MR-45CASTD	MR-SILCASTD	MR-62CASTD	MR-65CASTD	MR-SILCASTDS	MR-62CASTDS	MR-65CASTDS
Al_2O_3 (%)	44.0	56.0	62.0	45.0	58.0	62.0	67.0	59.0	62.0	67.0
Fe_2O_3 (%)	1.5	1.5	1.5	1.2	1.0	0.8	0.8	0.8	0.8	0.7
SiO_2 (%)	51.0	40.0	34.0	50.0	39.0	35.0	30.0	38.0	36.0	31.0
B.D. gm/cc	2.10	2.35	2.40	2.30	2.40	2.45	2.50	2.45	2.50	2.55
A.P. (%)	23	20	20	18	20	19	20	16	16	16
C.C.S. kg/cm²	250	400	400	450	450	550	550	650	650	750
R.U.L. ta°C	1380	1520	1570	1480	1600	1620	1640	1620	1650	1680
P.C.E Orton	31	36	36	33	36	36	36	36	36	36
R.T.E. (%)	0.55	0.54	0.58	0.58	0.58	0.52	0.62	0.58	0.60	0.61
T.C.w/m°K	1.10	1.58	1.70	1.24	1.64	1.75	1.85	1.70	1.80	1.90
Mortar Recommended	MR-45M	MR-SILM	MR-62M	MR-45M	MR-SILM	MR-62M	MR-65M	MR-SILM	MR-62M	MR-65M
Typical Application	Rider Arch, Bottom Blocks etc.	Bottom blocks, Regenerator etc.	Bottom blocks, Regenerator etc.	Bottom Blocks etc.	Regenerator, Distributor etc.	Regenerator, Distributor etc.	Regenerator, Distributor etc.	For more critical & corrosive areas	For more critical & corrosive areas	For more critical & corrosive areas

Note:
1- These values are average and may be changed from time to time without any information.
2- These values are for standard bricks of 228x114x64 mm size. For any other shape/size there may be reasonable variations.

B.D Bulk Density; A.P. Apparent Porosity; C.C.S.: Cold Crushing Strength; R.U.L. Refractoriness Under Load;
P.C.E Pyrometric Cone Equivalent; R.T.E.: Reversible ThermExpansion at 1000°C; T.C.: Thermal Conductivity at 1000°C HF



MULLITE & ALUMINA BASED PRODUCTS

	PRESSED PRODUCTS - BRICKS & SQUARE BLOCKS					VIBRO-CAST PRODUCTS - BLOCKS & SHAPES				
MR Quality	MR-72	MR-MUL	MR-MULS	MR-90	MR-99	MR-72 CAST	MR-MULCAST	MR-MULCASTS	MR-90 CAST	MR-99 CAST
Al_2O_3 (%)	70.0	72.0	78.0	90.0	99.4	70.0	72.0	78.0	90.0	99.4
Fe_2O_3 (%)	0.6	0.2	0.2	0.2	0.1	0.6	0.2	0.2	0.2	0.1
SiO_2 (%)	28.0	27.0	21.0	6.0	0.1	28.0	27.0	21.0	6.0	0.1
B.D. gm/cc	2.70	2.60	2.65	2.95	3.10	2.66	2.55	2.60	2.90	3.00
A.P. (%)	18	17	18	18	18	20	19	20	20	20
C.C.S. kg/cm²	500	800	800	800	900	500	800	680	700	750
R.U.L. ta°C	1640	1700	1700	1700	1700	1640	1700	1700	1700	1700
P.C.E Orton	36	38	38	38	38	36	38	38	38	38
R.T.E. (%)	0.62	0.60	0.66	0.72	0.80	0.62	0.60	0.64	0.70	0.76
T.C.w/m°K	1.98	1.92	1.98	2.10	2.22	1.92	1.86	1.90	2.02	2.18
Mortar Recommended	MR-70M	MR-MULM	MR-MULM	MR-90M	MR-99M	MR-70M	MR-MULM	MR-MULM	MR-90M	MR-99M
Typical Application	Port, Regenerator, etc.	Port, Walls, Crowns & Regenerator etc.	Port, Walls, Crowns & Regenerator etc.	Distributor Bottom & Side Walls,	Distributor Bottom & Side Walls,	Port, Regenerator, etc.	Port, Regenerator, etc.	Port, Regenerator, etc.	Distributor, Forehearth	Distributor, Forehearth

ZIRCON AND ZIRCON-MULLITE PRODUCTS

	PRESSED PRODUCTS - BRICKS & SQUARE BLOCKS							VIBRO-CAST PRODUCTS - BLOCKS & SHAPES			
MR Quality	MR-ZRN	MR-ZRD	MR-ZM12	MR-ZR5	MR-ZM	MR-ZMD	MR-ZMS	MR-ZIRCAST	MR-ZIRCASTS	MR-ZMCAST	MR-ZMCASTS
Al_2O_3 (%)			75		68.0	59.0	50.0	-	-	67.0	58.0
Fe_2O_3 (%)	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.3	0.2	0.2
SiO_2 (%)	63.0	65.0	11	67.0	18.0	25.0	31.0	62.0	64.5	18.0	25.0
B.D. gm/cc	3.60	3.65	3.0	3.70	3.20	3.30	3.35	3.55	3.60	3.15	3.25
A.P. (%)	20	20	18	19	18	18	18	22	22	20	20
C.C.S. kg/cm²	600	600	800	700	800	800	800	600	600	800	800
R.U.L. ta°C	1650	1680	1680	1700	1680	1700	1700	1650	1680	1680	1700
P.C.E Orton	36	38	38	38	38	38	38	36	38	38	38
R.T.E. (%)	0.50	0.52	0.60	0.54	0.60	0.62	0.65	0.50	0.52	0.60	0.62
T.C.w/m°K	2.50	2.54	1.70	2.57	1.76	1.85	1.92	2.46	2.50	1.71	1.78
Mortar Recommended	MR-ZRM	MR-ZRM	MR-ZMM	MR-ZRM	MR-ZMM	MR-ZMM	MR-ZMM	MR-ZRM	MR-ZRM	MR-ZMM	MR-ZMM
Typical Application	Sub-paving in tank bottom	Neutral layer, Sub-paving	Port wall & crown, Tank Superstructure	For Boro-silicate glass	Port wall & crown, Tank Superstructure	For severe corrosion areas	For severe corrosion areas	Burner Blocks, Plugs, etc.	Burner Blocks, Plugs, etc.	Burner Blocks, Curtain arch, etc.	Burner Blocks, Curtain arch, etc.

Note:
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2- These values are for standard bricks of 228x114x64 mm size. For any other shape/size there may be reasonable variations.

B.D Bulk Density; A.P. Apparent Porosity; C.C.S.: Cold Crushing Strength; R.U.L. Refractoriness Under Load;
P.C.E Pyrometric Cone Equivalent; R.T.E.: Reversible ThermExpansion at 1000°C; T.C.: Thermal Conductivity at 1000°C HF

FOREHEARTH REFRACTORIES & FEEDER EXPENDABLES

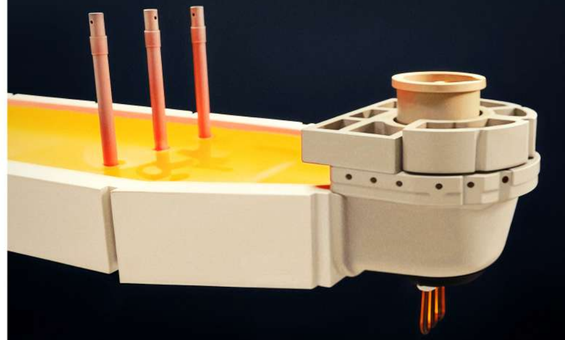
	ZIRCON - MULLITE RANGE						MULLITE RANGE					
MR Quality	MR-33 FG	MR-33	MR-15	MR-22S	MR-21	MR-35	MR-30	MR-38	MR-44	MR-45	MR-11	MR-90
Al_2O_3 (%)	74.0	74.0	68.0	52	81.0	49.0	66.0	72.0	79.0	82.0	91.0	90.0
Fe_2O_3 (%)	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2
SiO_2 (%)	13.0	13.0	12.0	17.0	3.0	15.0	15.0	27.0	18.0	16.0	8.0	6.0
ZrO_2 (%)	12.0	12.0	19.0	29.0 (min)	15.0	35.0	-	-	×	-	-	-
B.D. gm/cc	2.90	3.00	3.10	3.00	3.00	3.20	2.50	2.50	2.60	2.60	2.70	2.95
A.P. (%)	22	18	20	18	19	18	20	20	20	19	23	18
C.C.S. kg/cm²	800	800	800	900	900	900	600	800	600	800	500	700
P.C.E Orton	34	34	34	36	36	36	34	36	36	36+	38	38
R.T.E. (%)	0.66	0.68	0.60	0.62	0.61	0.62	0.48	0.52	0.53	0.61	0.70	0.70
T.C. w/m°K	2.04	2.06	2.04	2.20	2.20	2.20	2.02	1.85	1.87	1.86	2.03	2.02
T.S.R	V.Good	V.Good	V.Good	Exeellent	V.Good	V.Good	V.Good	V.Good	V.Good	V.Good	Good	Good
Application Recommendation												
Orifice Rings	××	-	×××	---	##	×××	-	-	-	×	×	-
Spouts	-	×	×××	---	-	×××	-	-	-	-	-	-
Tubes	-	××	×××	×××	-	×××	-	-	-	-	-	-
Plungers	-	××	×××	×××	-	×××	-	-	-	-	×××	×××
Stirrers	-	××	×××	×××	##	×××	-	-	-	-	×××	×××
Spout Burner / Cover	-	××	-	-	-	-	××	××	-	×××	-	-
Forehearth	-	××	-	-	-	-	××	××	-	××	-	-
Mandral Sleeve & Trough etc.	-	##	-	-	-	-	××	××	×××	-	##	-

	SPECIAL RANGE		SPECIAL RANGE WITH INSERTS			
MR Quality	MR-66	MR-FS99	MR-15CL	MR-15ZL	MR-21CL	MR-21ZL
Al_2O_3 (%)	-	-	68.0	68.0	81.0	81.0
Fe_2O_3 (%)	0.2	0.1	0.2	0.2	0.2	0.2
SiO_2 (%)	33.0	99.0	12.0	12.0	3.0	3.0
ZrO_2 (%)	66.0	-	19.0	19.0	15.0	15.0
B.D. gm/cc	3.50	1.80	3.10	3.10	3.00	3.00
A.P. (%)	18	19	20	20	19	19
C.C.S. kg/cm²	500	400	800	800	900	900
P.C.E Orton	38	31	34	34	36	36
R.T.E. (%)	0.50	0.18	0.60	0.60	0.61	0.61
T.C. w/m°K	2.50	1.10	2.04	2.04	2.20	2.20
T.S.R	V.Good	V.Good	V.Good	V.Good	V.Good	V.Good
Application Recommendation						
Orifice Rings	##	##	###	###	###	###
Spouts	-	-	###	###	###	###
Tubes	##	##	-	-	-	-
Plungers	##	##	-	-	-	-
Stirrers	-	-	-	-	-	-
Spout Burner / Cover	-	-	-	-	-	-
Forehearth	-	-	-	-	-	-
Mandral Sleeve & Trough etc.	-	-	-	-	-	-

Note: These values are average and may be changed from time to time without any information.
B.D.: Bulk Density; A.P. Apparent Porosity; C.C.S.: Cold Crushing Strength;
P.C.E.: Pyrometric Cone Equivalent; R.T.E.: Reversible Thermal Expansion at 1000°C;
T.C.: Thermal Conductivity at 1000°C HF; T.S.R.: Thermal shock

× standard
×× super standard
××× premium
special
super special

THE INNOVATIVE JEWEL OF REFRACTORIES



SPECIAL PRODUCTS: BRICKS & BLOCKS

MR Quality	MR-FS 99	MR-FS 99E	MR-ALCR	MR-CR 85	MR-CR 96	MR-ZR 95	MR-AL30	MR-AL50
Al_2O_3(%)	-	-	86.0	3.0	95	-	-	39
Fe_2O_3(%)	0.1	0.1	0.1	0.1	-	-	0.2	0.2
ZrO_2(%)	-	-	-	8.0	-	95.0	2.1	3.5
SiO_2(%)	99.0	96.0	-	-	-	-	1.5	2.5
CR_2O_3(%)	-	-	11.0	84.0	-	3.5 (MgO)	29.3	51
TiO_2(%)	-	-	-	3.5	4.0	-	-	-
B.D. gm/cc	1.85	1.80	3.20	4.10	4.10	5.20	3.45	3.7
A.P.(%)	19	20	17	16	19	5	16	15.5
C.C.S. kg/cm²	300	250	800	900	800	1200	1600	1200
R.U.L ta°C	1650	1600	1700	1700	1700	1700	1700	1700
P.C.E Orton	31	31	38	38	42	42	39	40
R.T.E.(%)	0.18	0.18	0.83	-	0.75	-	1.2 (1500°C)	1.2 (1550°C)
T.C.w/m°K	0.7	0.65	3.5	-	4.0	-	3.1	3.5
Material	Fused Silica	Fused Silica	Alumina-Chrome	Chrome Oxide	Chrome Oxide	Zirconia	Alumina	Alumina
Typical Application	Hot Repair Of Silica Roof	Feeder Expendables	Glass Line Repair	Liner for Orifice or Spout for Severe Corrosion	Throat & corner block of doghouse	Liner for Orifice or Spout for Severe Corrosion	Chrome	Chrome

SPECIAL PRODUCTS: MONOLITHICS

MR Quality	MR-ZIRPAVE-50	MR-ZIRPAVE-06	MR-ZRPATCH	MR-FUSIL	MR-AP 40 AR	MR-ZRPAICH-P	MR-ZMPATCH-P
Setting	Hydraulic	Air	Air	Chemical	Chemical	Chemical	Chemical
Grain Size mm	0-5.0	0-0.6	0-0.2	0-4.0	0-2.0	0-1.0	0-1.2
Al_2O_3(%)	50.0	50.0	-	-	35.0	3.5 (P_2O_5)	57.0
Fe_2O_3(%)	0.30	0.30	0.10	0.10	0.10	0.20	0.20
ZrO_2(%)	28.0	28.0	62.0	-	-	62.0	24.0
SiO_2(%)	20.0	20.0	32.0	98.0	65.0	32.0	13.0
Density gm/cc	3.2	3.1	3.5	1.8	2.3	3.6	3.2
C.C.S. kg/cm²	300	300	600	250	400	600	800
A.T.°C	1600	1600	1600	1100	1400	1650	1600
Remarks	Coarse grained recipe	Fine grained recipe	Alumina free material	Supplied with Liquid Binder	Supplied with Liquid Binder	Ramming min slight moist	Ramming min slight moist
Typical Application	Melter bottom paving layer	Melter bottom paving layer	Silica cown repair	Fused silica patching mass	Backup layer for acidic furnaces	Continer glass special glass	Continer glass special glass

INSULATION PRODUCTS

MR Quality	MR-LW 100	MR-LW 130	MR-LW 135/8	MR-LW 135/10	MR-LW 135/13	MR-LW 140/10	MR-LW 23	MR-LW 26	MR-LW 28	MR-LW 30	MR-LW 32	MR-INB 1	MR-INB 2	MR-INL	MR-INL-90
Eqivalent To															
-ASTM	-	-	-	-	-	-	23	26	28	30	32	-	-	-	-
-ISO	-	-	-	-	-	-	125L-0.5	140L-0.79	150L-0.89	160L-1.02	170L-1.25	-	-	180-1.5	-
MHT°C	1100	1300	1350	1350	1350	1400	1260	1400	1500	1600	1750	1400	1400	1850	1800
Al_2O_3(%)	32.0	36.0	34.0	35.0	37.0	38.0	36.0	57.0	67.0	73.0	75.0	40.0	40.0	96.0	90.0
Fe_2O_3(%)	2.0	2.0	1.6	2.0	3.0	2.0	1.2	1.0	0.6	0.5	0.5	2.0	2.0	0.2	0.2
SiO_2(%)	50.0	58.0	60.0	58.0	54.0	55.0	45.0	39.0	31.0	25.0	21.0	48.0	48.0	2.0	8.0
B.D. gm/cc	0.50	0.80	0.80	1.00	1.30	1.00	0.60	0.85	0.95	1.10	1.35	1.20	1.45	1.52	1.4-1.5
C.C.S. kg/cm²	8.0	40.0	30.0	40.0	120.0	40.0	10.0	15.0	20.0	45.0	35.0	100.0	180.0	60.0	130.0
R.T.E.(%)	0.60	0.65	0.60	0.50	0.50	0.55	0.60	0.60	0.78	0.65	0.65	0.56	0.62	0.72	1.04
Max.P.L.C(%)	-0.8 at	-1.2 at	-1.7 at	-1.5 at	-1.5 at	-1.5 at	-1.0 at	-0.7 at	-0.4 at	-0.5 at	-0.5 at	-1.0 at	-1.0 at	±0.5 at	
in 3 hours	1100°C	1300°C	1350°C	1350°C	1350°C	1400°C	1250°C	1400°C	1500°C	1500°C	1600°C	1400°C	1400°C	1600°C	
Thermnal conductivity w/m°k															
-400°C	0.14	0.28	0.24	0.32	0.43	0.34	0.18	0.27	0.32	0.41	0.60	0.56	0.82	1.35	
-600°C	0.16	0.34	0.25	0.35	0.45	0.36	0.20	0.29	0.35	0.43	0.60	0.58	0.84	1.37	
-800°C	0.18	0.37	0.27	0.38	0.47	0.38	0.25	0.31	0.38	0.45	0.55	0.60	0.87	1.40	
-1000°C	0.20	0.43	0.31	0.40	0.48	0.39	0.30	0.33	0.40	0.48	0.65	0.62	0.89	1.43	

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B.D. : Bulk Density; A.P. Apparent Porosity; C.C.S.: Cold Crushing Strength; R.U.L. Refractoriness Under Load;
P.C.E. :Pyrometric Cone Equivalent; R.T.E.: Reversible Thermal Expansion at 1000°C; T.C.: Thermal Conductivity at 1000°C HF
M.H.T. : Maximum hot face Temperature °C; A.T. Maximum Application Temperature; P.L.C.: Permanent Linear Change

Quality Analysis for;
- **Durable Refractory Solutions**

MR-MONOLITHICS

	INSULATING CASTABLE		DENSE CASTABLE								LOW CEMENT CASTABLE					NO-CEMENT CASTABLE		
MR Quality	MR-INC×	MR-94SL×	MR-45K××	MR-HA45(N)	MR-50K××	MR-60K	MR-70K	MR-HA70SUPER	MR-90K	MR-95S	MR-LC45××	MR-LC60	MR-LC70	MR-LC80	MR-LC90	MR-AP45××	MR-AP60	MR-AP95
Grading mm	0-5	0-5	0-4	0-5	0-4	0-5	0-5	0-2	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
setting	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Chemical	Chemical	Chemical
Al_2O_3(%)	50.0	94.0	45.0	45.0	50.0	60.0	70.0	70.0	88.0	93.0	45.0	60.0	70.0	80.0	90.0	44.0	57.0	92.0
Fe_2O_3(%)	2.0	0.3	2.5	4.0	1.2	1.0	0.8	4.0	0.5	1.0	1.5	1.5	1.5	1.5	1.0	2.0	1.0	0.5
SiO_2(%)	43.0	0.5	48.0	35.0	42.0	35.0	26.0	12.0	5.0	1.0	50.0	35.0	25.0	15.0	6.0	53.0	41.0	7.0
B.D. gm/cc	1.50	1.60	2.00	2.20	2.10	2.20	2.45	2.5	2.70	2.80	2.20	2.40	2.60	2.70	2.90	1.80	2.20	2.80
C.C.S. kg/cm²																		
110°C	150	90	250	400	400	450	500	350	550	550	700	700	700	800	900	80	90	110
800°C	90	70	200	250	260	280	300	-	300	300	800	800	800	850	900	250	300	350
1100°C	60	110	300	350	400	400	450	450	550	550	900	900	900	1000	1000	400	450	500
P.C.E. orton	30	36	30	30	31	33	34	31	36	38	32	35	36	38	38	32	35	38
P.L.C. (%)	±1.0	± 0.5	± 1.5	±0.8	± 1.0	± 0.5	± 0.5	± 1.0	± 0.2	± 0.2	± 1.0	±1.0	± 1.0	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5
	(1200 °C/3 hrs)	(1500 °C/3 hrs)	(1400 °C/3 hrs)	(1350°C/3 hrs)	(1400 °C/3 hrs)	(1450 °C/3 hrs)	(1500 °C/3 hrs)	(1500 °C/3 hrs)	(1500 °Cl3 hrs)	(1500 °C/3 hrs)	(1400 °C/3 hrs)	(1450 °C/3 hrs)	(1500 °C/3 hrs)	(1500 °C/3 hrs)	(1500 °C 3 hrs)	(1400 °C/3 hrs)	(1450 °Cl3 hrs)	(1500 °C/3 hrs)
A.T. °C	1200	1600	1400	1350	1450	1500	1600	1450	1700	1750	1500	1600	1650	1700	1750	1500	1600	1800

Note: 1. These values are average and may be changed from time to time without any information.
2. In case of No-Cement Castables, liquid binder supplied with the material is to be mixed in a specified ratio
2. For all other castables, water is to be mixed for trowelling consistency.
3. Shelf life is 12 months, if stored in a dry place away from moisture.
4. Packing size: ×25Kgs/××40Kgs/50 Kgs in polythene-lined HDPE bags.

B.D. : Bulk density; C.C.S.: Cold crushing strength; P.L.C. : Permanent linear change;
P.C.E. : Pyrometric Cone Equivalent; A.T. Maximum application temperature; S.T. : Sintering Temperature

PLASTIC MASS- HEAT SETTING

MR Quality	MR-Plast AK-50	MR-Plast AK-60	MR-Plast AK-80	MR-Plast AK-90	MR-Plast ALC
Grading mm	0-4	0-4	0-4	0-4	0-4
Al_2O_3(%)	50.0	60.0	80.0	88.0	85.0
Fe_2O_3(%)	1.0	1.5	1.5	0.5	0.5
SiO_2(%)	46.0	35.0	16.0	8.0	8.0 (Cr_2O_3)
P.C.E. orton	35	35	38	38	38
S.T. °C	1100	1100	1100	1100	1100
A.T. °C	1600	1700	1750	1750	1750
Typical Application	Special application	Special application	Special application	Special application	For fibre glass

MR MORTARS

	CERAMIC SETTING MORTARS												CHEMICAL SETTING MORTARS	
MR Quality	MR-40M×	MR-45M×	MR-SILM	MR-62M	MR-65M	MR-70M	MR-MULM	MR-90M	MR-99M	MR-ZRM	MR-ZMM	MR-FSM×	MR-SET AK-50	MR-SET AK-50C
Grading mm	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-1.0
Al_2O_3(%)	38.0	43.0	56.0	60.0	64.0	70.0	70.0	88.0	98.0		65.0		50.0	50.0
ZrO_2(%)	-									62.0	17.5			
Fe_2O_3(%)	2.2	2.0	1.5	1.5	1.2	1.5	1.0	1.0	0.5	0.2	0.5		2.0	2.0
SiO_2(%)	56.0	52.0	42.0	35.0	31.0	27.0	27.0	8.0	1.0	35.0	15.0	0.1	45.0	45.0
P.C.E. orton	31	32	35	35	36	36	36	36	36	36	36	98.0	32	32
S.T. °C	1200	1200	1250	1250	1250	1250	1250	1250	1300	1200	1200	32	1100	1100
To be used for laying	Fireclay Bricks	MR-45R & MR-45D etc.	MR-MR R,MR-SILD & MR-SILDS etc	MR-62 R,MR-62D & MR-62DS etc.	MR-65D & MR-65DS etc.	MR-72, MR-72 CAST	MR-MUL & MR-MULS etc.	MR-90, MR-90 CAST	MR-99, MR-99 CAST	MR-ZRN, MR-ZRD & MR-ZRS etc.	MR-ZM, SCL-ZMD & MR-ZMS etc.	1100 MR-FS99	MR-45 & SCL-45D & Joint sealing	MR-45 & SCL-45D & Joint sealing

CEMENTS AND POWDERS

MR Quality	Spout Luting Cement MR-CSM	Orufice Luting Cement MR-SOM	Spout Insulation MR-SCF	Orifice Ring Insulation MR-OHF	Anti Adhesive Cement MR-AAC
Al_2O_3(%)	57.0	50.0	36.0	5.0	92.0
SiO_2(%)	40.0	45.0	55.0	90.0	7.0
Fe_2O_3(%)	0.8	1.0	1.5	1.5	-
Grain Size mm	0-0.5	0-0.5	0-2.0	0-0.5	-
Remarks	Spout luting cement; for filling joint between feeder channel block and spout.	Orifice Ring cement; for cementing orifice ring to Spout, ceramically bonding, does not sinter, easily removed	Insulating material; filled dry between spout and metal casing.	Orifice Ring Insulation; is filled dry into orifice ring holder	A fine powder sprinkled on the orifice luting cement to prevent sticking and easy removal of the orifice ring after use.

Note: 1. These values are average and may be changed from time to time without any information.
2. To be mixed with water for desired consistency.
3. Shelf life is 12 months, if stored in a dry place away from moisture.
4. Packing size: 40 Kgs/ 50 Kgs in polythene-lined HDPE bags.

P.C.E. :Pyrometric Cone Equivalent; S.T. :Sintering Temperature

Mahaam
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