

Fireclay/Superduty

Product	Apparent Porosity	Bulk Density	Cold Crushing Strength	RUL ta	Permanent Linear Change on Reheating	Refractoriness	Al ₂ O ₃	Fe ₂ O ₃	Other	Primary Raw Material	Application
	%	gm/cm ³	kg/cm ²	°C	%	°C	%	%	%		
MCL 30D	23.0	2.05	250	1350	1350°C/2 hrs. ±0.5	1690	36.0	2.5	-	Chamotte	General Purpose, Stove wall & checkerwork, glass tank bottom, coke ovens, anode baking, transfer ladles, backup
MCL 40	23.0	2.10	300	1400	1400°C/2 hrs. ±0.5	1710	40.0	2.5	-	Chamotte	
MCL 40D	21.0	2.15	300	1400	1400°C/2 hrs. ±0.5	1710	41.0	2.0	-	Chamotte	
MCL 40TB	22.0	2.15	250	1400	1400°C/2 hrs. ±0.5	1710	40.0	2.0	-	Chamotte	
MCL HG	20.0	2.15	300	1380	1400°C/2 hrs. ±0.5	1690	38.0	2.5	-	Chamotte	
MCL 42	21.0	2.20	350	1420	1420°C/2 hrs. ±0.8	1730	42.0	2.0	-	Chamotte/Kyanite	General Purpose, Stove wall & checkerwork, coke ovens, anode baking, blast furnace main, reheating furnace, glass regenerator wall & checkerwork
MCL 42D	19.0	2.25	400	1430	1450°C/2 hrs. ±0.5	1730	43.0	2.0	-	Chamotte/Kyanite	
MCL 42SD	16.0	2.28	500	1450	1450°C/2 hrs. ±0.3	1730	44.0	1.5	-	Chamotte/Kyanite	
MCL 45	21.0	2.25	400	1430	1450°C/2 hrs. ±0.5	1745	45.0	1.8	-	Chamotte/Sillimanite	
MCL 45D	19.0	2.30	450	1470	1480°C/2 hrs. ±0.5	1745	45.0	1.5	-	Chamotte/Sillimanite	
MCL 45SD	16.0	2.36	600	1480	1500°C/2 hrs. ±0.5	1750	47.0	1.0	-	Chamotte/Sillimanite	

High Performance Superduty

Product	Apparent Porosity	Bulk Density	Cold Crushing Strength	RUL ta	Permanent Linear Change on Reheating	Refractoriness	Al ₂ O ₃	Fe ₂ O ₃	Other	Primary Raw Material	Application
	%	gm/cm ³	kg/cm ²	°C	%	°C	%	%	%		
MCL S	16.0	2.38	600	1500	1500°C/2 hrs. ±0.4	1750	47.0	1.0	Alkali: 0.6	Chamotte/Sillimanite	Blast Furnace upper stack & throat
MCL SX	15.0	2.40	650	1540	1500°C/2 hrs. ±0.2	1770	48.0	0.9	Alkali: 0.5	Kaolin/Andalusite	Glass regenerator wall & checkerwork
MCL SDA	18.0	2.36	600	1530	1500°C/2 hrs. ±0.3	1770	48.0	0.9	Alkali: 0.5	Kaolin/Andalusite	Anode Baking furnace
MCL SDT	12.0	2.40	700	1520	1500°C/2 hrs. ±0.2	1770	48.0	0.9	Alkali: 0.5	Kaolin/Andalusite	TV Glass furnace regenerator
MCL SDP	16.0	2.38	600	1500	1500°C/2 hrs. ±0.5	1750	45.0	1.0	P ₂ O ₅ : 1.5	Chamotte/Sillimanite	Aluminum Indus., Blast furnace throat

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High Alumina: Low Iron

Product	Apparent Porosity	Bulk Density	Cold Crushing Strength	RUL ta	Permanent Linear Change on Reheating	Al ₂ O ₃	Fe ₂ O ₃	Other	Primary Raw Material	Application
	%	gm/cm ³	kg/cm ²	°C	%	%	%	%		
MCL 50K	21.0	2.28	450	1480	1480°C/2 hrs. ±0.5	50.0	1.5	-	Kyanite	General applications, Stove checkerwork & wall, Reheating furnace roof, Glass general applications, Glass tank bottom, Glass regenerator, Blast furnace, Coke oven, Lime calcination, Ceramic industry
MCL SILL	21.0	2.30	450	1500	1500°C/2 hrs. ±0.5	56.0	1.5	-	Kyanite/Sillimanite	
MCL SILL D	18.0	2.35	500	1520	1500°C/2 hrs. ±0.5	58.0	1.2	Alkali: 0.8	Kyanite/Sillimanite	
MCL 60K	20.0	2.35	500	1520	1500°C/2 hrs. ±0.5	60.0	1.5	-	Kyanite/Sillimanite	
MCL 62	21.0	2.42	500	1520	1500°C/2 hrs. ±0.5	62.0	1.5	-	Sillimanite/Alumina	
MCL 62D	18.0	2.45	600	1550	1600°C/2 hrs. ±0.5	62.0	1.2	Alkali: 0.8	Sillimanite/Alumina	
MCL 60TB	21.0	2.40	450	1540	1600°C/2 hrs. ±0.5	60.0	1.2	-	Sillimanite/Alumina	
MCL 62SD	16.0	2.50	650	1580	1600°C/2 hrs. ±0.3	63.0	1.0	Alkali: 0.6	Sillimanite/Fused Alumina	
MCL 70D	18.0	2.60	600	1600	1600°C/2 hrs. ±0.3	70.0	1.0	Alkali: 0.5	Sillimanite/Fused Alumina	

High Alumina: Bauxite

Product	Apparent Porosity	Bulk Density	Cold Crushing Strength	RUL ta	Permanent Linear Change on Reheating	Al ₂ O ₃	Fe ₂ O ₃	Other	Primary Raw Material	Application
	%	gm/cm ³	kg/cm ²	°C	%	%	%	%		
MCL 50B	23.0	2.30	350	-	-	50.0	-	-	Bauxite/Chamotte	General applications in steelmaking
MCL 60B	23.0	2.50	400	-	-	60.0	-	-	Indigenous Bauxite	
MCL 70B	23.0	2.60	450	-	1600°C/2 hrs. ±2.5	68.0	3.0	-	Indigenous Bauxite	
MCL 75BD	21.0	2.65	550	1500	1600°C/2 hrs. ±2.0	75.0	2.5	-	Chinese Rotary Kiln Bauxite	Steel ladle metal line and backup
MCL 80B	21.0	2.70	500	1480	1600°C/2 hrs. ±1.5	78.0	3.0	-	Chinese Round Kiln Bauxite	
MCL 80BD	20.0	2.75	550	1520	1600°C/2 hrs. ±1.5	80.0	2.5	-	Chinese Rotary Kiln Bauxite	

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High Alumina: Specialised

Product	Apparent Porosity	Bulk Density	Cold Crushing Strength	RUL ta	Permanent Linear Change on Reheating	Al ₂ O ₃	Fe ₂ O ₃	Other	Primary Raw Material	Application
	%	gm/cm ³	kg/cm ²	°C	%	%	%	%		
MCL 62AD	16.0	2.50	650	1600	1600°C/2 hrs. ±0.5	62.0	1.0	Alkali: 0.6	Andalusite/Fused Alumina	Glass regenerator packing support, wall, checkerwork, crown, port, Blast furnace hearth, belly, bosh, stack
MCL 62ADS	16.0	2.55	650	1650	1600°C/2 hrs. ±0.3	63.0	0.9	Alkali: 0.6	Andalusite/Fused Alumina	
MCL 65AD	16.0	2.57	700	1650	1600°C/2 hrs. ±0.3	65.0	0.8	Alkali: 0.5	Andalusite/Fused Alumina	
MCL 65ADS	16.0	2.60	700	1680	1600°C/2 hrs. ±0.2	66.0	0.8	Alkali: 0.5	Andalusite/Fused Alumina	
MCL MULCOR 70	16.0	2.60	700	1700	1600°C/2 hrs. ±0.2	69.0	0.6	Alkali: 0.4	Andalusite/Fused Alumina	
MCL MULCOR 80	15.0	2.80	1000	1700	1650°C/2 hrs. ±0.1	80.0	0.5	Alkali: 0.3	Mullite/Fused Alumina	Blast Furnace hearth, bosh, belly
MCL MULCOR 90	16.0	2.90	900	1700	1700°C/2 hrs. ±0.1	90.0	0.3	Alkali: 0.3	Fused Alumina	Chemical industry, Specialized iron & steel applications, Carbon black, Secondary reformers, High temperature kilns
MCL COR 94	16.0	3.00	900	1700	1700°C/2 hrs. ±0.1	94.0	0.3	Alkali: 0.3	Fused Alumina/Tabular Alumina	
MCL 80 SDP	18.0	2.75	800	1550	1600°C/2 hrs. ±1.5	82.0	1.5	P ₂ O ₅ : 1.5	Chinese Bauxite/Fused Alumina	Aluminum industry
MCL 85 SDP	18.0	2.80	800	1550	1600°C/2 hrs. ±1.5	85.0	1.0	P ₂ O ₅ : 1.5	Chinese Bauxite/Fused Alumina	
MCL HAH	18.0	2.95	1000	1550	1600°C/2 hrs. ±0.5	88.0	1.8	Morgan Marshall: 30	Chinese Bauxite/Fused Alumina	Rolling mill hearth
MCL MULL	18.0	2.55	650	1700	1650°C/2 hrs. ±0.1	72.0	0.5	Mullite Phase: 80	Fused Mullite	Glass specialized applications, regenerator wall, crown & packing, High temperature kilns
MCL MULL D	16.0	2.60	700	1700	1700°C/2 hrs. ±0.1	75.0	0.3	Mullite Phase: 90	Fused Mullite	
MCL MULL X	15.0	2.65	900	1700	1700°C/2 hrs. ±0.1	76.0	0.3	Mullite Phase: 90	Fused Mullite/Tabular Alumina	

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Zircon Bearing

Product	Apparent Porosity	Bulk Density	Cold Crushing Strength	RUL ta	Al ₂ O ₃	ZrO ₂	Fe ₂ O ₃	Primary Raw Material	Application
	%	gm/cm ³	kg/cm ²	°C	%	%	%		
MCL ZIR 63	20.0	3.60	600	1600	-	63.0	0.5	Zircon Sand	Glass melter sub paving, superstructure, steel metering nozzle
MCL ZIR 65	17.0	3.70	800	1700	1.0	65.0	0.3	High Purity Zircon Sand	
MCL ZM 4831	16.0	3.05	1000	1700	48.0	30.0	0.5	Fused AZS/Zircon/Alumina	Glass melter sub paving, glass contact, superstructure, regenerator wall, port, crown
MCL ZM 5725	15.0	3.10	1200	1700	56.0	24.0	0.5	Fused AZS/Zircon/Alumina	
MCL ZM 6010	17.0	2.90	800	1650	60.0	10.0	0.8	Andalusite/Zircon	
MCL ZM 7020	18.0	2.95	800	1700	68.0	18.0	0.3	Fused AZS/Zircon/Fused Alumina	

Silicon Carbide

Product	Apparent Porosity	Bulk Density	Cold Crushing Strength	RUL ta	Al ₂ O ₃	SiC	Fe ₂ O ₃	Primary Raw Material	Application
	%	gm/cm ³	kg/cm ²	°C	%	%	%		
MCL SiC 80	19.0	2.45	600	1500	15.0	80.0	1.2	Fused SiC/Clay	Ferro alloy submerged arc furnace
MCL SiC 85	16.0	2.50	800	1550	12.0	84.0	0.9	Fused SiC/Clay	

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