

# Product Datasheet

## MMP LCC 45

<b>Brand Name: -</b>	<b>MMP LCC 45</b>	
Type	45% Alumina LC Castable	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Calcined Clay	
Max Service Temp.	1550 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-6.0 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	46.5	45 Min
Fe <sub>2</sub> O <sub>3</sub> :	0.9	1.0 Max
CaO :	1.06	1.7 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	2.33	2.30 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	750	700 Min
Fired at 800°C/3hrs.	850	800 Min
Fired at 1100°C/3hrs	950	900 Min
Fired at 1500°C/3hrs	1050	1000 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+32/1717	32/1717 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	± 0.2 Max
Fired at 1100°C/3hrs.	-0.15	± 0.3 Max
Fired at 1500°C/3hrs.	-0.80	±1.00Max

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Water requirements indicated are based on laboratory test conditions. Actual water requirement may vary subject to site conditions. The properties shown are for vibratory cast material only unless specified otherwise. All values are based on test results on standard bars of size 160x40x40 mm. Test methods are guided by and based on various Indian Standards (IS).

# Product Datasheet

## MMP LCC 60 A

<b>Brand Name: -</b>	<b>MMP LCC 60 A</b>	
Type	Andalusite Based 60% Alumina LC Castable	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Andalusite	
Max Service Temp.	1600 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-6.0 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	61.00	60.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	0.50	0.80 Max
CaO :	1.50	1.60 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	2.66	2.60 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	750	700 Min
Fired at 800°C/3hrs.	--	--
Fired at 1100°C/3hrs	800	--
Fired at 1550°C/3hrs	1050	900 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+37	37/1820 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	--
Fired at 1100°C/3hrs.	-0.12	--
Fired at 1550°C/3hrs.	0.50	±0.80Max

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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# Product Datasheet

## MMP LCC 60 S

<b>Brand Name: -</b>	<b>MMP LCC 60 S</b>	
Type	LC Castable Low PLC	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Calcined Clay & Silimanite	
Max Service Temp.	1600 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-6.0 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	60.00	58.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	0.90	1.00 Max
CaO :	1.75	1.80 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	2.60	2.55 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	780	750 Min
Fired at 800°C/3hrs.	870	800 Min
Fired at 1100°C/3hrs	925	900 Min
Fired at 1550°C/3hrs	1050	1000 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+36	36/1804 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	± 0.2 Max
Fired at 1100°C/3hrs.	-0.15	± 0.3 Max
Fired at 1550°C/3hrs.	0.40	±0.60Max

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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# Product Datasheet

## MMP LCC 60

<b>Brand Name: -</b>	<b>MMP LCC 60</b>	
Type	60% Alumina LC Castable	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Calcined Clay & Calcined Bauxite	
Max Service Temp.	1600 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-5.5 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	60.80	60.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	1.20	1.50 Max
CaO :	1.70	1.80 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	2.62	2.60 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	770	700 Min
Fired at 800°C/3hrs.	850	800 Min
Fired at 1100°C/3hrs	950	900 Min
Fired at 1500°C/3hrs	1050	1000 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+36/+1804	36/1804 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	± 0.2 Max
Fired at 1100°C/3hrs.	-0.15	± 0.3 Max
Fired at 1500°C/3hrs.	-0.60	±1.00Max

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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# Product Datasheet

## MMP LCC 70 Li

<b>Brand Name: -</b>	<b>MMP LCC 70 Li</b>	
Type	70% Alumina LC Castable Low Iron	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Calcined Clay & BFA	
Max Service Temp.	1650 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-6.0 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	70.50	70.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	0.75	0.80 Max
CaO :	1.70	1.80 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	2.70	2.65 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	760	700 Min
Fired at 800°C/3hrs.	850	800 Min
Fired at 1100°C/3hrs	980	900 Min
Fired at 1550°C/3hrs	1080	1000 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+36	36/1804 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	--
Fired at 1100°C/3hrs.	-0.15	--
Fired at 1550°C/3hrs.	-0.50	±0.70Max

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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# Product Datasheet

## MMP LCC 70 M

<b>Brand Name: -</b>	<b>MMP LCC 70 M</b>	
Type	Mullite Based 70% Alumina LC Castable	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Mullite	
Max Service Temp.	1700 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-6.0 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	71.8	70.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	0.40	0.50 Max
CaO :	1.70	1.80 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	2.65	2.60 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	750	700 Min
Fired at 800°C/3hrs.	840	800 Min
Fired at 1100°C/3hrs	950	900 Min
Fired at 1550°C/3hrs	1200	1100 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+37	37/1820 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	± 0.2 Max
Fired at 1100°C/3hrs.	-0.15	± 0.3 Max
Fired at 1550°C/3hrs.	-0.40	±0.60Max

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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# Product Datasheet

## MMP LCC 70

<b>Brand Name: -</b>	<b>MMP LCC 70</b>	
Type	70% Alumina LC Castable	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Calcined Clay & Calcined Bauxite	
Max Service Temp.	1600 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-5.5 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	70.50	70.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	1.30	1.50 Max
CaO :	1.80	1.90 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	2.70	2.65 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	800	750 Min
Fired at 800°C/3hrs.	850	--
Fired at 1100°C/3hrs	950	--
Fired at 1550°C/3hrs	1100	1000 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+36/+1804	36/1804 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	± 0.2 Max
Fired at 1100°C/3hrs.	-0.15	± 0.3 Max
Fired at 1550°C/3hrs.	-0.80	±1.00Max

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# Product Datasheet

## MMP LCC 80

<b>Brand Name: -</b>	<b>MMP LCC 80</b>	
Type	80% Alumina LC Castable	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Calcined Clay & Calcined Bauxite	
Max Service Temp.	1700 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-5.5 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	80.50	80.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	1.70	1.80 Max
CaO :	1.80	1.90 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	2.93	2.90 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	860	800 Min
Fired at 800°C/3hrs.	970	--
Fired at 1100°C/3hrs	1060	--
Fired at 1550°C/3hrs	1200	1150 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+37/1820	37/1820 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	± 0.2 Max
Fired at 1100°C/3hrs.	-0.15	± 0.3 Max
Fired at 1550°C/3hrs.	-0.80	±1.00Max

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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# Product Datasheet

## MMP LCC 90

<b>Brand Name: -</b>	<b>MMP LCC 90</b>	
Type	90% Alumina LC Castable	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	Brown Fused Alumina (BFA)	
Max Service Temp.	1700 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-5.5 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	90.50	90.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	0.30	1.00 Max
CaO :	1.5	1.60 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	3.02	3.00 Max
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	980	950 Min
Fired at 800°C/3hrs.	1040	1000 Min
Fired at 1100°C/3hrs	1140	1100 Min
Fired at 1550°C/3hrs	1350	1200 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+37/1820	37/1820 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	± 0.2 Max
Fired at 1100°C/3hrs.	-0.15	± 0.3 Max
Fired at 1550°C/3hrs.	-0.60	±0.80Max

Packing: 25 Kg Bags

Storage Life: 9 Months

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# Product Datasheet

## MMP LCC 95

<b>Brand Name: -</b>	<b>MMP LCC 95</b>	
Type	95% Alumina LC Castable	
Nature of Bond	Hydraulic	
Installation	Vibration Casting	
Raw Material Base	White Tabular Alumina	
Max Service Temp.	1800 °C	
Max Grain Size	6 mm	
Water Required for Casting	5.0-5.5 %	
<b>Chemical Analyses: - (%)</b>	<b>Typical</b>	<b>Specification</b>
Al <sub>2</sub> O <sub>3</sub> :	94.2	94.0 Min
Fe <sub>2</sub> O <sub>3</sub> :	0.20	0.30 Max
CaO :	1.20	1.30 Max
<b>Physical Properties: -</b>		
B. D (gm/cc) Drying at 110°C/24 hrs.	3.12	3.10 Min
<b>Cold Crushing Strength (Kg/cm<sup>2</sup>):</b>		
Drying at 110°C/24 hrs.	1020	1000 Min
Fired at 800°C/3hrs.	1080	1050 Min
Fired at 1100°C/3hrs	1150	1100 Min
Fired at 1500°C/3hrs	1350	1250 Min
<b>Thermal Properties: -</b>		
Refractoriness, Orton / 0 °C	+38	38/1835 Min
<b>Permanent Linear Change (%)</b>		
Fired at 800°C/3hrs.	-0.05	± 0.2 Max
Fired at 1100°C/3hrs.	-0.10	± 0.3 Max
Fired at 1550°C/3hrs.	-0.65	±0.80Max

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