



## TECHNICAL DATA SHEET

Revision: May 5, 2021

### RockRidge CM60 - Calcined Mullite (60% Alumina)

**Product:** RockRidge 60% alumina-containing calcined mullite aggregate and powders.

**Description:** Calcined Mullite is a ground and sintered gibbsite, specially processed at temperatures exceeding 1500° C to create a stable refractory material.

**Applications:** Calcined Mullite is used in high temperature applications requiring lightweight materials with low thermal expansion coefficients and creep resistance. Commonly used in investment casting and refractory shapes and castables.

#### Mineralogical Composition

Mullite (Gibbsite)	84.3 %
Maghemite	0.25 %
Rutile	0.25 %
Silica (Amorphous)	15.2 %

#### Typical Chemical Analysis:

Mineral	%
Silicon Oxide (SiO <sub>2</sub> )	31.3 %
Titanium Oxide (TiO <sub>2</sub> )	2.53 %
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	2.97 %
Potassium Oxide (K <sub>2</sub> O)	1.27 %
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	61.1 %
Calcium Oxide (CaO)	0.05 %

#### Grit Size Analysis

% Retained					
ASTM >>	#18/100™	#18/100™E	#30/100™	#30MF™	#35MF™
mm >>	1.00 <>0.150	1.00 <>0.150	0.600<>0.150	< 0.600	< 0.500
Mesh	Special Ranges with Magnetic Treatment				
#18	0.08	0.25	-	-	-
#20	-	-	-	-	-
#25	-	26.1	-	-	-
#30	34.8	-	0.25	0.84	-
#35	-	-	-	-	1.47
#40	29.4	44.4	31.3	34.2	10.6
#50	-	-	-	-	33.5
#60	24.6	-	52.5	-	-
#70	-	25.5	-	-	-
#80	-	2.55	-	-	28.7
#100	10.4	0.91	14.8	62.6	9.13
#140	-	-	-	-	-
#200	-	-	-	-	-
#300	-	-	-	-	-
#325	-	-	-	-	-
Fines	0.76	0.29	1.14	2.38	16.7
Ø mean	0.53	0.56	0.37	0.36	0.28

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#### Standard Split Sizes

#### Grit Size Analysis

% Retained								
ASTM >>	#4/8	#4/12	#8/20	#14/30	#16/30	#18/40	#18/60	#30/80
mm >>	4.75<>2.36	4.75<>1.70	2.36<>0.85	1.40<>0.60	1.18<>0.60	1.0<>0.425	1.0<>0.25	0.60 <
Mesh	Special Ranges							
#5/16	-	-	-	-	-	-	-	-
#1/4	-	-	-	-	-	-	-	-
#4	0.8	-	-	-	-	-	-	-
#5	24.9	0.74	-	-	-	-	-	-
#6	-	12.7	-	-	-	-	-	-
#8	72.7	-	0.73	-	-	-	-	-
#10	-	-	7.98	-	-	-	-	-
#12	-	85.9	-	-	-	-	-	-
#14	-	-	-	0.29	-	-	-	-
#16	-	-	-	14.7	1.31	-	-	-
#18	-	-	-	-	23.6	2.04	1.42	-
#20	-	-	91.1	-	-	27.8	18.2	-
#25	-	-	-	-	-	30.9	-	-
#30	-	-	-	84.5	73.8	22.3	-	0.65
#35	-	-	-	-	-	14.6	-	20
#40	-	-	-	-	-	1.65	-	27.3
#50	-	-	-	-	-	-	-	41.3
#60	-	-	-	-	-	-	80.3	-
#200	-	-	-	-	-	-	-	0.5
Fines	1.57	0.71	0.18	0.52	1.39	0.62	0.05	0.11
Ø mean	3.45	3.04	1.48	0.95	0.87	0.75	0.62	0.41



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#### Standard Run of Mill Sizes

#### Grit Size Analysis

	% Retained							
ASTM >>	#20 MF	#30 MF	#35 MF	#50 MF	#140 MF	#140 BR	#200 MF	#325 MF
mm >>	<0.85	<0.60	<0.60	<0.30	<0.106	<0.106	<0.075	<0.045
Mesh	Special Ranges							
#18	-	-	-	-	-	-	-	-
#20	4.05	-	-	-	-	-	-	-
#25	14.5	-	-	-	-	-	-	-
#30	-	1.54	-	0.00	-	-	-	-
#35	-	12.6	0.47	-	0.47	-	-	-
#40	-	-	9.86	-	9.86	-	-	-
#50	-	-	25.8	0.60	25.8	-	-	-
#60	-	-	-	-	-	-	-	-
#70	-	-	-	-	-	-	-	-
#80	-	-	31.2	-	31.2	-	-	-
#100	-	-	7.75	13.5	7.75	-	-	-
#140	-	-	-	-	13.3	7.04	-	-
#200	-	-	-	24.5	-	-	11.8	-
#325	-	-	-	15.3	-	-	-	18.7
Fines	81.4	85.9	25	-	25	-	-	-
Ø mean	0.7	0.5	0.026	0.13	0.26	0.12	0.08	0.05

*Custom Sizes Upon Request*

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