

Unical-M

cc40

Savage, MN

Unical-M is a medium sized granular CaCO_3 product processed in Savage from mined high calcium limestone with minimum calcium content of 38%



Particle Size Measurement -- Laser Diffraction

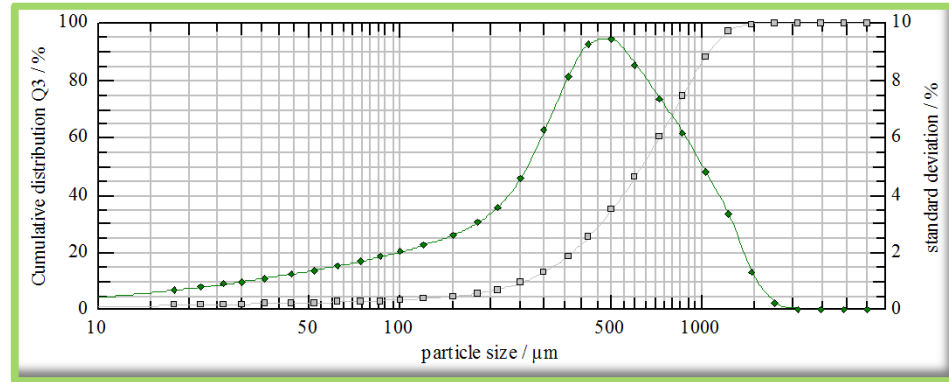
Average Particle Size = **626.35** microns

Ave particle size: half of the particles are above and half are below this point on the "S" shaped cumulative distribution graph.

% Ca 38.79
%CaCO₃ 96.98

Typical Analyses		
Magnesium (Mg)	0.869	%
Silicon (Si)	0.55	%
Silica (SiO ₂)	1.18	%
Iron (Fe)	0.279	%
Sodium (Na)	0.019	%
Potassium (K)	0.016	%
Sulfur (S)	0.935	%
Manganese (Mn)	0.031	%
Phosphorus (P)	0.005	%
Chloride (Cl)	0.001	%
Chromium (Cr)	< 5	ppm
Aluminum (Al)	186	ppm
Boron (B)	10	ppm
Barium (Ba)	< 5	ppm
Lead (Pb)	8	ppm
Nickel (Ni)	< 5	ppm
Cobalt (Co)	< 5	ppm
Copper (Cu)	14	ppm
Zinc (Zn)	72	ppm
Cadmium (Cd)	< 5	ppm
Iodine (I)	3	ppm
Arsenic (As)	< 5	ppm
Beryllium (Be)	< 5	ppm
Selenium (Se)	0.202	ppm
Mercury (Hg)	< 0.050	ppm
Vanadium (V)	< 5	ppm
Molybdenum (Mo)	< 5	ppm
Fluorine (F)	< 1	ppm
Bismuth (Bi)	< 5	ppm
Antimony (Sb)	< 5	ppm

% Acid Solubility	
Average	45.12
Maximum	51.41
Minimum	31.51
H ₂ O	< 0.5%
Bulk Density	(lbs./cu.ft.)
Loose:	88
Packed:	97



μm = micron (1/1000 of a millimeter)

Particle Distribution--U.S. Screen Comparison				
14 X 70 mesh product				
Micron Size	U.S. Screen	% Retained	% Passing	
1700	12	0.1	99.9	
1400	14	1.1	98.8	
1180	16	3.6	95.2	
1000	18	9.1	86.2	
850	20	12.7	73.5	
710	25	14.6	58.9	
500	35	24.3	34.5	
425	40	8.8	25.8	
355	45	7.6	18.2	
300	50	5.3	12.9	
212	70	6.1	6.9	
180	80	1.4	5.4	
150	100	1.0	4.4	
75	200	1.8	2.6	
10	Pan	2.6		
		100.0		

cumulative distribution (laser diffraction)			
Microns	% Passing	Microns	% Passing
3500	100	210	6.72
2940	100	180	5.40
2460	100	150	4.37
2060	100	120	3.54
1740	99.95	100	3.07
1460	99.37	86	2.77
1220	97.08	74	2.54
1020	87.82	62	2.31
860	74.50	52	2.12
720	59.98	44	1.96
600	46.32	36	1.79
500	34.53	30	1.64
420	25.18	26	1.53
360	18.64	22	1.40
300	12.91	18	1.23
250	9.05		