

Unical-F

Alden, IA

Unical-F is a medium coarse particulate CaCO₃ product processed in Alden, IA from quarried high calcium limestone with minimum calcium content of 38%



Particle Size Measurement -- Laser Diffraction

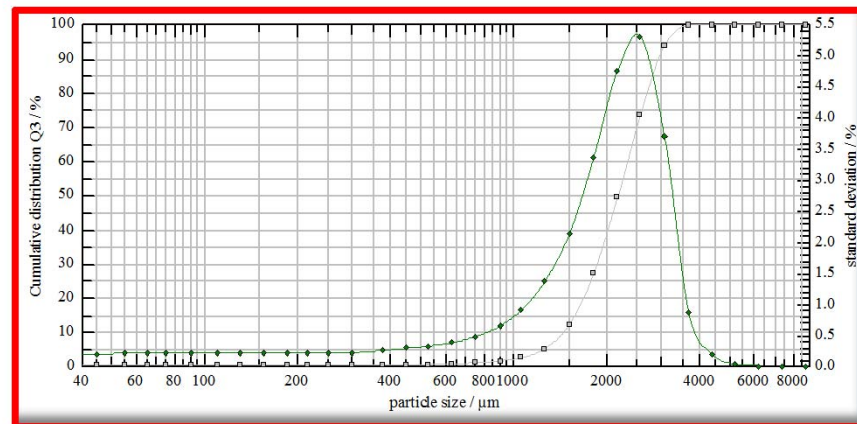
Average Particle Size = **2166.85** microns

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

% Ca **39.52**
% CaCO₃ **98.80**

Typical Analyses		
Magnesium (Mg)	0.118	%
Silicon (Si)	0.07	%
Silica (SiO ₂)	0.14	%
Iron (Fe)	0.145	%
Sodium (Na)	0.021	%
Potassium (K)	0.009	%
Sulfur (S)	0.888	%
Manganese (Mn)	0.015	%
Phosphorus (P)	0.007	%
Chloride (Cl)	0.004	%
Chromium (Cr)	7	ppm
Aluminum (Al)	107	ppm
Boron (B)	10	ppm
Barium (Ba)	< 5	ppm
Lead (Pb)	< 5	ppm
Nickel (Ni)	< 5	ppm
Cobalt (Co)	< 5	ppm
Copper (Cu)	29	ppm
Zinc (Zn)	118	ppm
Cadmium (Cd)	< 5	ppm
Iodine (I)	2	ppm
Arsenic (As)	< 5	ppm
Beryllium (Be)	< 5	ppm
Selenium (Se)	0.252	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	45.00
Maximum	47.99
Minimum	40.88
H ₂ O	< 0.5%
Bulk Density	(lbs./cu.ft.)
Loose:	78
Packed:	83



μm = micron (1/1000 of a millimeter)

Particle Distribution--U.S. Screen Comparison			
6 X 16 mesh product			
Micron Size	U.S. Screen	% Retained	% Passing
6700	3	0.0	100.0
5600	3.5	0.0	100.0
4750	4	0.0	100.0
3350	6	3.2	96.8
2360	8	34.8	62.0
2000	10	22.3	39.7
1700	12	17.7	22.0
1180	16	17.9	4.1
850	20	2.9	1.3
425	40	1.1	0.2
75	200	0.1	0.1
	Pan	0.1	
		100.0	

cumulative distribution (laser diffraction)			
Microns	% Passing	Microns	% Passing
8750	100	525	0.39
7350	100	450	0.26
6150	100	375	0.17
5150	99.99	300	0.12
4350	99.96	250	0.11
3650	99.74	215	0.11
3050	93.85	185	0.11
2550	73.54	155	0.11
2150	49.21	130	0.11
1800	27.02	110	0.11
1500	12.08	90	0.11
1250	5.04	75	0.11
1050	2.44	65	0.11
900	1.47	55	0.11
750	0.92	45	0.07
625	0.59		