

Unical-S

Alden, IA

Unical-S is a small particle sized granular CaCO₃ product processed from quarried high calcium limestone in Alden, IA with minimum calcium content of 38%.



Particle Size Measurement -- Laser Diffraction

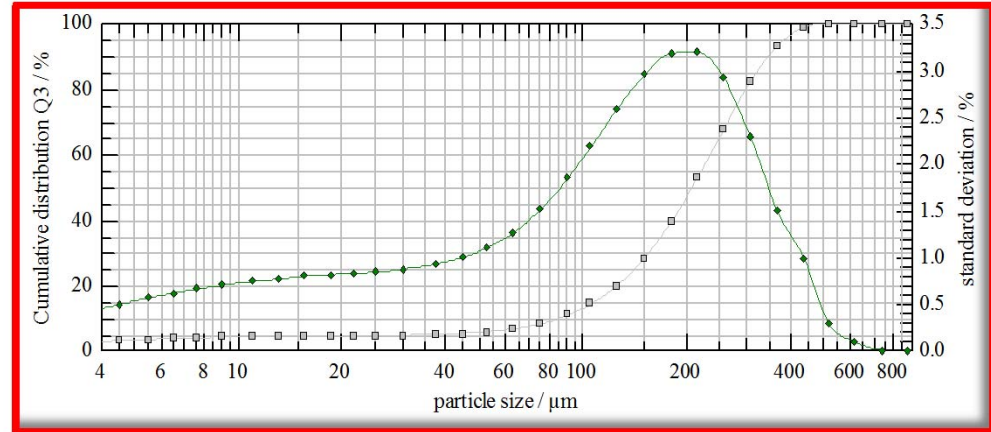
Average Particle Size = **207.17** microns

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

% Ca 39.27
% CaCO₃ 98.18

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	55.85
Maximum	60.83
Minimum	47.98
H ₂ O	< 0.5%
Bulk Density (lbs./cu.ft.)	
Loose:	81
Packed:	89



μm = micron (1/1000 of a millimeter)

Particle Distribution--U.S. Screen Comparison			
40 X 200 mesh product			
Micron Size	U.S. Screen	% Retained	% Passing
2000	10	0.0	100.0
1700	12	0.0	100.0
1400	14	0.0	100.0
1180	16	0.0	100.0
1000	18	0.0	100.0
710	25	0.0	100.0
500	35	0.3	99.7
425	40	1.9	97.8
355	45	6.5	91.4
300	50	10.6	80.8
212	70	28.9	51.9
180	80	12.5	39.4
150	100	11.3	28.1
75	200	20.0	8.1
10	Pan	8.1	
		100.0	

cumulative distribution (laser diffraction)			
Microns	% Passing	Microns	% Passing
875	100	52.5	5.56
735	100	45	5.07
615	99.99	37.5	4.71
515	99.94	30	4.49
435	98.59	25	4.40
365	93.17	21.5	4.39
305	82.20	18.5	4.39
255	67.62	15.5	4.38
215	53.07	13	4.34
180	39.39	11	4.24
150	28.07	9	4.06
125	19.71	7.5	3.83
105	14.13	6.5	3.61
90	10.74	5.5	3.32
75	8.10	4.5	2.93
62.5	6.49		