

Unical-F

Weeping Water, NE
Plant #1

Unical-F is a medium coarse particulate CaCO₃ product processed in Weeping Water, NE from mined high calcium limestone with minimum calcium content of 38%



Particle Size Measurement -- Laser Diffraction

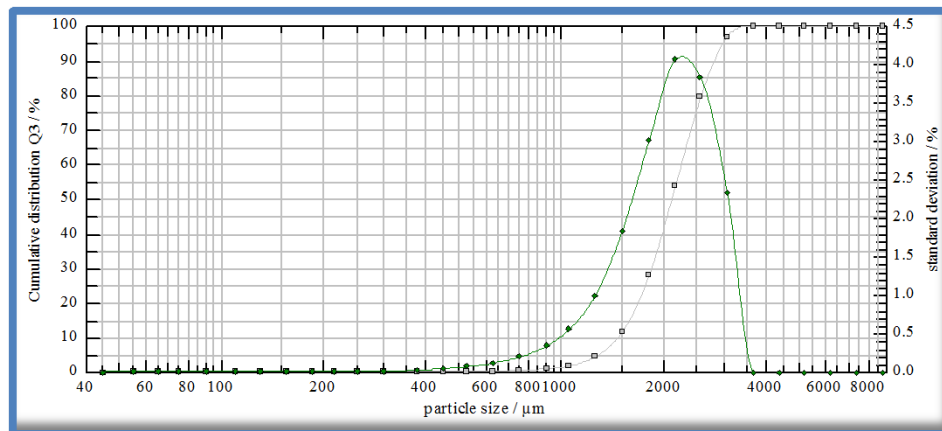
Average Particle Size = **2101.25** microns

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

% Ca 39.07
%CaCO₃ 97.68

Typical Analyses		
Magnesium (Mg)	0.272	%
Silicon (Si)	0.73	%
Silica (SiO ₂)	1.56	%
Iron (Fe)	0.142	%
Sodium (Na)	0.025	%
Potassium (K)	0.024	%
Sulfur (S)	0.878	%
Manganese (Mn)	0.019	%
Phosphorus (P)	0.008	%
Chloride (Cl)	0.002	%
Chromium (Cr)	6	ppm
Aluminum (Al)	456	ppm
Boron (B)	14	ppm
Barium (Ba)	15	ppm
Lead (Pb)	< 5	ppm
Nickel (Ni)	< 5	ppm
Cobalt (Co)	< 5	ppm
Copper (Cu)	32	ppm
Zinc (Zn)	145	ppm
Cadmium (Cd)	< 5	ppm
Iodine (I)	3	ppm
Arsenic (As)	< 5	ppm
Beryllium (Be)	< 5	ppm
Selenium (Se)	0.56	ppm
Mercury (Hg)	<0.050	ppm
Vanadium (V)	< 5	ppm
Molybdenum (Mo)	14	ppm
Fluorine (F)	< 1	ppm
Bismuth (Bi)	< 5	ppm
Antimony (Sb)	< 5	ppm

% Acid Solubility	
Average	38.17
Maximum	42.49
Minimum	35.53
H ₂ O	< 0.5%
Bulk Density	(lbs./cu.ft.)
Loose:	86
Packed:	96



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	1.6	98.4
2360	8	31.1	67.3
2000	10	24.5	42.7
1700	12	20.2	22.5
1180	16	19.0	3.5
850	20	2.7	0.8
425	40	0.8	0.0
75	200	0.0	0.0
	Pan	0.0	
		100.0	

cumulative distribution (laser diffraction)			
Microns	% Passing	Microns	% Passing
8750	100	525	0.12
7350	100	450	0.03
6150	100	375	0.03
5150	100	300	0.02
4350	100	250	0.02
3650	100	215	0.02
3050	96.75	185	0.02
2550	79.44	155	0.02
2150	53.77	130	0.02
1800	27.99	110	0.02
1500	11.55	90	0.02
1250	4.39	75	0.02
1050	1.88	65	0.02
900	1.00	55	0.02
750	0.52	45	0.00
625	0.26		