

## Unical-F

Savage, MN

Unical-F is a medium coarse particulate CaCO<sub>3</sub> products processed in Savage from mined high calcium limestone with minimum calcium



## Particle Size Measurement -- Laser Diffraction

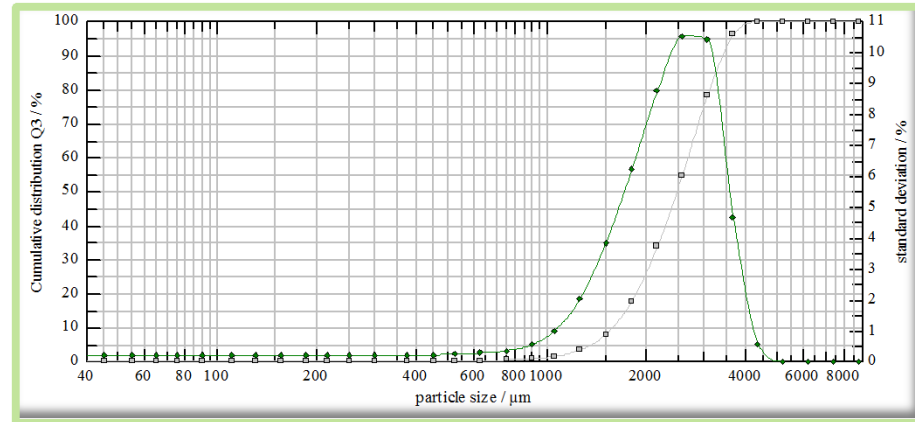
Average Particle Size = **2476.56** microns

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

**% Ca** 38.91  
**%CaCO<sub>3</sub>** 97.28

Typical Analyses		
Magnesium (Mg)	0.869	%
Silicon (Si)	0.55	%
Silica (SiO <sub>2</sub> )	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	<b>39.30</b>
Maximum	<b>45.24</b>
Minimum	<b>33.57</b>
H <sub>2</sub> O	< 0.5%
Bulk Density (lbs./cu.ft.)	
Loose:	<b>86</b>
Packed:	<b>91</b>



$\mu\text{m}$  = 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	<b>3</b>	0.0	100.0
5600	<b>3.5</b>	0.0	100.0
4750	<b>4</b>	0.1	99.9
3350	<b>6</b>	12.7	87.2
2360	<b>8</b>	42.5	44.7
2000	<b>10</b>	17.7	27.0
1700	<b>12</b>	12.5	14.5
1180	<b>16</b>	11.8	2.7
850	<b>20</b>	2.0	0.7
425	<b>40</b>	0.6	0.1
75	<b>200</b>	0.0	0.1
	<b>Pan</b>	0.1	
		100.0	

cumulative distribution (laser diffraction)			
Microns	% Passing	Microns	% Passing
8750	100	525	0.11
7350	100	450	0.07
6150	100	375	0.06
5150	100	300	0.06
4350	99.85	250	0.06
3650	96.04	215	0.06
3050	78.35	185	0.06
2550	54.38	155	0.06
2150	33.90	130	0.06
1800	17.79	110	0.06
1500	7.94	90	0.06
1250	3.32	75	0.06
1050	1.50	65	0.06
900	0.80	55	0.06
750	0.42	45	0.06
625	0.22		