

# Unical L

Weeping Water, NE  
Plant #1

Unical-L is a large particle sized granular CaCO<sub>3</sub> product processed from mined high calcium limestone in Weeping Water, NE with minimum calcium content of 38%



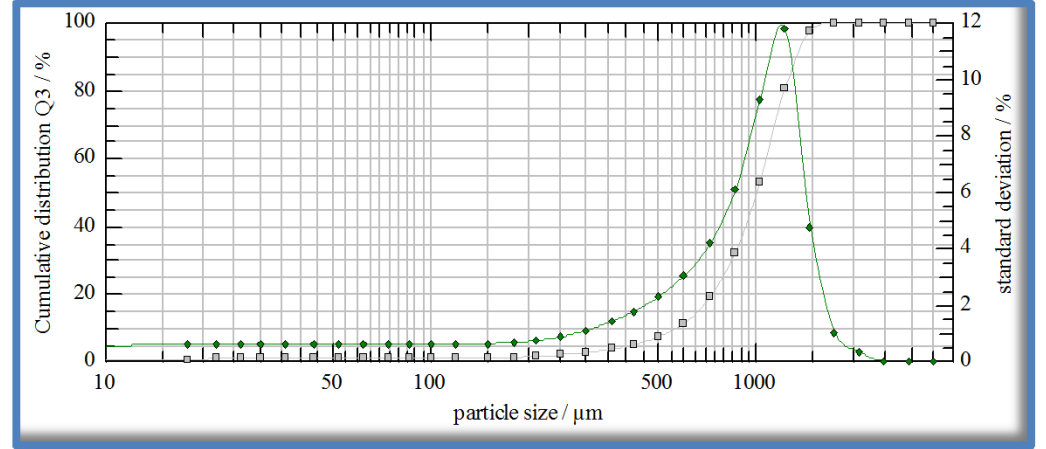
## Particle Size Measurement -- Laser Diffraction

Average Particle Size = **1006.05** microns

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

**% Ca 38.94**  
**%CaCO<sub>3</sub> 97.35**

% Acid Solubility	
Average	<b>43.12</b>
Maximum	<b>45.37</b>
Minimum	<b>37.51</b>
H <sub>2</sub> O	< 0.5%
Bulk Density (lbs./cu.ft.)	
Loose:	<b>87</b>
Packed:	<b>98</b>



μm = micron (1/1000 of a millimeter)

Typical Analyses		
Magnesium (Mg)	0.272	%
Silicon (Si)	0.73	%
Silica (SiO <sub>2</sub> )	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

Particle Distribution--U.S. Screen Comparison			
14 X 40 mesh product			
Micron Size	U.S. Screen	% Retained	% Passing
2000	<b>10</b>	0.0	100.0
1700	<b>12</b>	0.4	99.6
1400	<b>14</b>	6.2	93.3
1180	<b>16</b>	18.3	75.1
1000	<b>18</b>	24.9	50.2
710	<b>25</b>	32.0	18.2
500	<b>35</b>	11.2	7.0
425	<b>40</b>	2.2	4.9
355	<b>45</b>	1.5	3.4
300	<b>50</b>	0.9	2.4
212	<b>70</b>	1.1	1.3
180	<b>80</b>	0.3	1.0
150	<b>100</b>	0.2	0.8
75	<b>200</b>	0.3	0.6
10	<b>Pan</b>	0.6	
		100.0	

cumulative distribution (laser diffraction)			
Microns	% Passing	Microns	% Passing
3500	100	210	1.31
2940	100	180	1.04
2460	100	150	0.83
2060	99.98	120	0.67
1740	99.88	100	0.60
1460	97.56	86	0.58
1220	80.65	74	0.58
1020	52.77	62	0.58
860	32.20	52	0.58
720	18.86	44	0.58
600	11.20	36	0.58
500	7.04	30	0.58
420	4.75	26	0.57
360	3.44	22	0.57
300	2.41	18	0.53
250	1.74		

Data presented from monthly composite testing is typical of product. However, no warranties or claims of specific performance is implied or given.