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DYNAPOZ METAKAOLIN

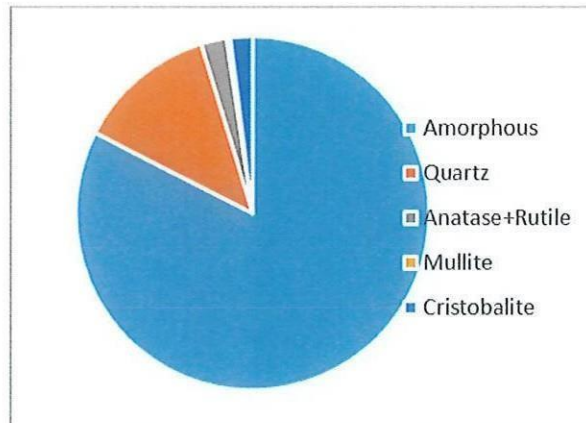
Part #110-CR

Chemistry by XRF:

SiO2	57.2%
Al2O3	36.7%
Fe2O3	1.78%
CaO	0.48%
MgO	0.36%
Na2O	0.08%
K2O	1.08%
TiO2	2.01%
P2O5	0.12%
SrO	0.04%

Mineralogy by XRD:

Amorphous	82.5%
Quartz	12.8%
Anatase+Rutile	2.33%
Mullite	0.33%
Cristobalite	2.0%



QA Approval

4/4/2024 10:25 AM
F#4.10-025
7/10/13

Measurement Details

Operator Name mastersizer
 Sample Name DYNAPOZ
 SOP File Name CHRISTY (DRY).msop

Identification

COMPANY TEST
 Sample Name DYNAPOZ
 LOT NO TEST 1
 PALLET

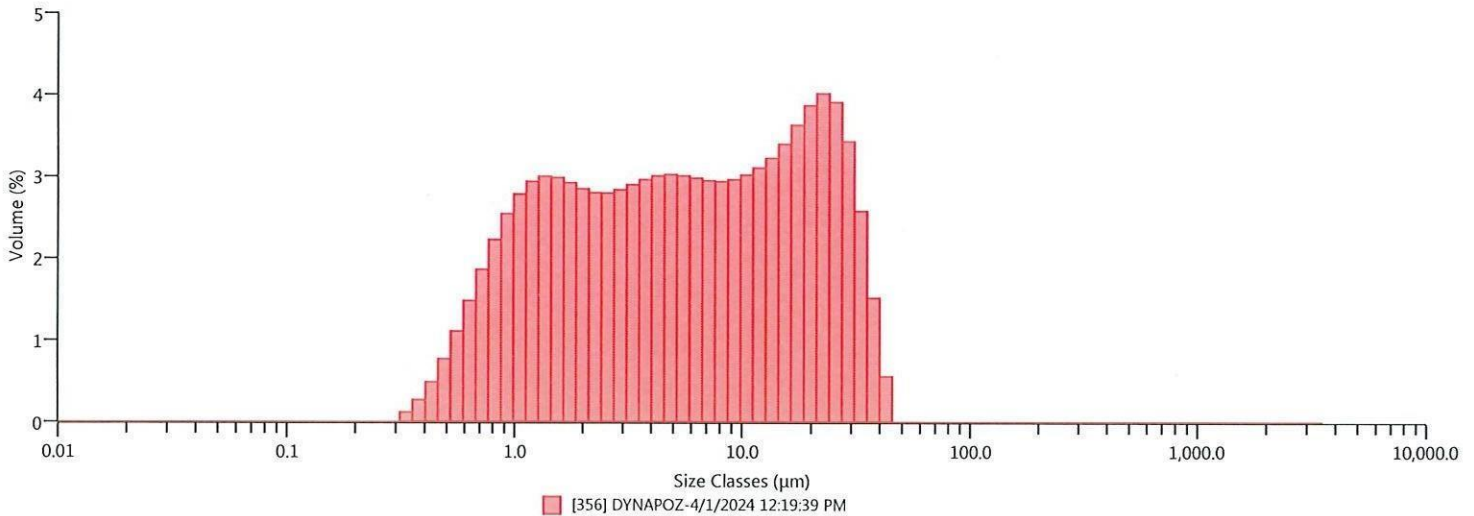
Result

Concentration 0.0008 %
 Span 4.523
 Uniformity 1.378
 D [3,2] 2.57 μm
 D [4,3] 9.78 μm
 Dv (10) 0.947 μm
Dv (50) 5.48 μm
 Dv (80) 18.6 μm
 Dv (90) 25.7 μm
 Dv (95) 30.7 μm
 Dv (97) 33.8 μm

Result

Volume Above (74) μm 0.00 %
 Volume Below (74) μm 100.00 %
 Volume Above (45) μm 0.06 %
 Volume Below (45) μm 99.94 %
 Specific Surface Area 1943 m^2/kg

Histogram



Result

Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In	Size (μm)	% Volume In
0.0100	0.00	0.0597	0.00	0.357	0.27	2.13	2.81	12.7	3.23	76.0	0.00	454	0.00
0.0114	0.00	0.0679	0.00	0.405	0.49	2.42	2.80	14.5	3.40	86.4	0.00	516	0.00
0.0129	0.00	0.0771	0.00	0.460	0.77	2.75	2.84	16.4	3.64	98.1	0.00	586	0.00
0.0147	0.00	0.0876	0.00	0.523	1.11	3.12	2.90	18.7	3.88	111	0.00	666	0.00
0.0167	0.00	0.0995	0.00	0.594	1.48	3.55	2.97	21.2	4.02	127	0.00	756	0.00
0.0189	0.00	0.113	0.00	0.675	1.87	4.03	3.01	24.1	3.92	144	0.00	859	0.00
0.0215	0.00	0.128	0.00	0.767	2.23	4.58	3.03	27.4	3.44	163	0.00	976	0.00
0.0244	0.00	0.146	0.00	0.872	2.55	5.21	3.02	31.1	2.58	186	0.00	1110	0.00
0.0278	0.00	0.166	0.00	0.991	2.79	5.92	2.99	35.3	1.52	211	0.00	1260	0.00
0.0315	0.00	0.188	0.00	1.13	2.94	6.72	2.96	40.1	0.56	240	0.00	1430	0.00
0.0358	0.00	0.214	0.00	1.28	3.01	7.64	2.95	45.6	0.00	272	0.00	1630	0.00
0.0407	0.00	0.243	0.00	1.45	2.99	8.68	2.97	51.8	0.00	310	0.00	1850	0.00
0.0463	0.00	0.276	0.00	1.65	2.93	9.86	3.03	58.9	0.00	352	0.00	2100	0.00
0.0526	0.00	0.314	0.12	1.88	2.86	11.2	3.11	66.9	0.00	400	0.00	2390	0.00

TCG Certified Testing Results: Dynapoz Metakaolin: Part # 110-CR

Mix Description:	Control	10% Metakaolin Replacement	15% Metakaolin Replacement
Physical Properties	26-Oct	1-Nov	2-Nov
Slump (in.) ASTM C31	4.00	6.25	5.75
Air % As Tested ASTM C231	6.8	7.7	6.0
Density lb/ft3 ASTM C138	145.9	143.9	146.3
Concrete Temp °F ASTM C1064	70	73	73
ASTM C403 Time of Set Initial	4:35	4:16	4:24
ASTM C403 Time of Set Final	6:12	6:12	6:05
ASTM C39 Comp. Strength 4" x 8" cyl.			
1 Day Strength psi (3 each)	3000	2920	3160
7 Day Strength psi (3 each)	4960	5770	6410
28 Day Strength psi (3 each)	5630	7360	7690
90 Day Strength psi (3 each)	6360	7920	8950
ASTM C1876 Conductivity 4" x 8" cyl.			
28 d Bulk Elect Conduct (mS/m)	18.04	7.82	6.22
90 day Bulk Conduct (ms/m)	12.81	4.78	3.57
ASTM C1202 Rapid Chloride			
28 days Coulombs	4295	1544	1065
90 days Coulombs	2625	334	535
Nord NT Build 492			
28 days DNSS (x 10 ⁻¹² m ² /s)	16.0	7.8	6.5
ASTM C666 Rapid Freeze Thaw			
Durability Factor %	922700%	99%	
Weight loss %	0.00%	0.24%	
ASTM 1556 Bulk Diffusion			
Surface Concentration (ppm)	0	11897	8690
Diffusion Coefficient (Da), (x 10 ⁻¹² m ² /s)	4.20E-04	3.45E-12	2.38E-12
ASTM C1585 Capillary Absorption			
Initial Absorption Rate (mm/s ^{1/2})	0.23900	0.00102	0.00057
Secondary Absorption Rate (mm/s ^{1/2})	0.38800	0.00021	0.00032
ASTM C1260 & C1567 ASR Potential			
Linear Expansion % @ 14 days	98.800	0.133	0.046
Linear Expansion % @ 28 days	0.002	0.270	0.118



Material Packaging



40 LB Bags /50 Per Pallet
2000 LB Net Material



Bulk-Bag on Pallet
2000 LB Net Material



Bulk Delivery