

Concrete Mixture Analysis Worksheet

Project Name: Miscellaneous Mix Designs
 Client Name: Daytona Redi Mix
 MDOT Project #: Various
 Maximum Aggregate Size (inches): 1.5

Date: 8/27/2024
 CT Project #: 230408
 Mix ID #: 4500HP (Slag - Mid-Range)

MATERIALS				
Type	Source	Class	Spec. Grav.	F/T Dialation
Coarse	Manitoulin (MDOT 95-0005CA)	6AA	2.82	0.001
Intermediate	Port Inland (MDOT 74-0005CA)	26A	2.68	0.036
			1.00	
Fine	Krake-Measel (MDOT 44-0051SG)	2NS	2.68	
Cement	Ash Grove - Missisauga	Type II	3.10	
GGBFS	Ash Grove - Detroit	100	2.91	
ADMIXTURES				
Type	Supplier	Dosage (oz/cwt)		
SA-50	MAPEI	0.8		
Dynamon SX	MAPEI	5		

PROPORTIONS (SSD)				
Type	Wt. lbs.	Sp. Grav.	Vol. ft ³	% Vol.
Cement	423	3.1	2.19	
GGBFS	141	2.91	0.78	
Coarse	1870	2.82	10.63	57.20
Intermediate	110	2.68	0.66	3.54
		1.00	0.00	0.00
Fine	1220	2.68	7.30	39.26
Water	237	1	3.80	
Air, %	6.5		1.76	
				27.10
Total Cementitious:		564	lbs. or	6.0 bag
Water/Cement Ratio:		0.44		
Percent Cementitious Replacement:		25%		

SSD wt., lbs	GRADATIONS								Gradation Date: <u>8/27/2024</u>			
	Coarse		Intermediate		0		Fine		Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
	1870		110		0		1220					
Abs. Volume	10.63		0.66		0.00		7.30					
Aggregate % Vol.	57.2		3.5		0.0		39.3					
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100	57.2	100	3.5	0.0	0.0	100	39.3	100.0	0.0	0.0	
1 1/2"	100	57.2	100	3.5	0.0	0.0	100	39.3	100.0	0.0	0.0	
1"	100	57.2	100	3.5	0.0	0.0	100	39.3	100.0	0.0	0.0	
3/4"	80	45.8	100	3.5	0.0	0.0	100	39.3	88.6	11.4	11.44	
1/2"	47	26.9	99	3.5	0.0	0.0	100	39.3	69.7	30.3	18.9	
3/8"	22	12.6	85	3.0	0.0	0.0	100	39.3	54.9	45.1	14.8	
# 4	5	2.9	20	0.7	0.0	0.0	99	38.9	42.4	57.6	12.4	
# 8	3	1.7	7	0.2	0.0	0.0	83	32.6	34.6	65.4	7.9	
# 16	3	1.7	4	0.1	0.0	0.0	65	25.5	27.4	72.6	7.2	
# 30	2	1.1	3	0.1	0.0	0.0	49	19.2	20.5	79.5	6.9	
# 50	2	1.1	2	0.1	0.0	0.0	23	9.0	10.2	89.8	10.2	
# 100	2	1.1	2	0.1	0.0	0.0	5	2.0	3.2	96.8	7.1	
# 200	1	0.7	2	0.1	0.0	0.0	1	0.4	1.2	98.8	1.9	

Fine Aggregate Fineness Modulus: 2.76 FM

Coarseness Factor (x-axis): 69
 ((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 35
 (Pass #8 + Adjustment Factor)

