

Concrete Mixture Analysis Worksheet

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

Date: 6/4/2024
 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	1640	2.82	9.32	50.38
Intermediate	290	2.68	1.73	9.37
		1.00	0.00	0.00
Fine	1245	2.68	7.44	40.24
27.02				
Water	237	1	3.80	
Air, %	6.5		1.76	
Total Cementitious:		564	lbs. or	6.0 bag
Water/Cement Ratio:		0.44		
Percent Cementitious Replacement:		25%		

	GRADATIONS								Gradation Date: <u>6/4/2024</u>			
	Coarse		Intermediate		0		Fine					
	SSD wt., lbs	1640	290	0	1245					Total % Passing	% Cumm. Retained	Retained Sieve, %
Abs. Volume	9.32	1.73	0.00	7.44								
Aggregate % Vol.	50.4	9.4	0.0	40.2								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100	50.4	100	9.4	0.0	0.0	100	40.2	100.0	0.0	0.0	
1 1/2"	100	50.2	100	9.4	0.0	0.0	100	40.2	99.8	0.2	0.2	
1"	100	50.4	100	9.4	0.0	0.0	100	40.2	100.0	0.0	-0.2	
3/4"	89	44.8	100	9.4	0.0	0.0	100	40.2	94.5	5.5	5.5	
1/2"	51	25.7	95	8.9	0.0	0.0	100	40.2	74.8	25.2	19.6	
3/8"	23	11.6	85	8.0	0.0	0.0	100	40.2	59.8	40.2	15.0	
# 4	3	1.5	22	2.1	0.0	0.0	100	40.2	43.8	56.2	16.0	
# 8	2	1.0	5	0.5	0.0	0.0	86	34.6	36.1	63.9	7.7	
# 16	1	0.5	3	0.3	0.0	0.0	71	28.6	29.4	70.6	6.7	
# 30	1	0.5	2	0.2	0.0	0.0	53	21.3	22.0	78.0	7.3	
# 50	1	0.5	2	0.2	0.0	0.0	24	9.7	10.4	89.6	11.7	
# 100	1	0.5	2	0.2	0.0	0.0	5	2.0	2.7	97.3	7.6	
# 200	1	0.6	2	0.2	0.0	0.0	1	0.5	1.3	98.7	1.4	

Fine Aggregate Fineness Modulus: 2.61 FM

Coarseness Factor (x-axis): 63
((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 36
(Pass #8 + Adjustment Factor)

