

Concrete Mixture Analysis Worksheet

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

Date: 7/16/2024
 CT Project #: 230408
 Mix ID #: 3500HP (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	395	3.1	2.04	
GGBFS	131	2.91	0.72	
Coarse	1910	2.82	10.85	57.71
Intermediate	100	2.68	0.60	3.18
		1.00	0.00	0.00
Fine	1230	2.68	7.36	39.11
27.03				
Water	231	1	3.70	
Air, %	6.5		1.76	
Total Cementitious:		526	lbs. or	5.6 bag
Water/Cement Ratio:		0.44		
Percent Cementitious Replacement:		25%		

GRADATIONS												
	Coarse		Intermediate		0		Fine		Gradation Date: <u>7/16/2024</u>			
	SSD wt., lbs	Abs. Volume	Abs. Volume	Abs. Volume	Abs. Volume	Abs. Volume	Abs. Volume	Abs. Volume				
	1910	10.85	100	0.60	0	0.00	1230	7.36				
Aggregate % Vol.	57.7	57.7	3.2	3.2	0.0	0.0	39.1	39.1				
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
2"	100	57.7	100	3.2	0.0	0.0	100	39.1	100.0	0.0	0.0	
1 1/2"	100	57.5	100	3.2	0.0	0.0	100	39.1	99.8	0.2	0.2	
1"	100	57.7	100	3.2	0.0	0.0	100	39.1	100.0	0.0	-0.2	
3/4"	92	53.1	100	3.2	0.0	0.0	100	39.1	95.4	4.6	4.6	
1/2"	59	34.1	96	3.1	0.0	0.0	100	39.1	76.2	23.8	19.2	
3/8"	35	20.2	83	2.6	0.0	0.0	100	39.1	61.9	38.1	14.3	
# 4	7	4.0	18	0.6	0.0	0.0	99	38.7	43.3	56.7	18.6	
# 8	3	1.7	5	0.2	0.0	0.0	85	33.2	35.1	64.9	8.2	
# 16	2	1.2	3	0.1	0.0	0.0	68	26.6	27.8	72.2	7.3	
# 30	2	1.2	3	0.1	0.0	0.0	50	19.6	20.8	79.2	7.0	
# 50	2	1.2	2	0.1	0.0	0.0	24	9.4	10.6	89.4	10.2	
# 100	2	1.2	2	0.1	0.0	0.0	6	2.3	3.6	96.4	7.0	
# 200	2	1.0	2	0.1	0.0	0.0	2	0.8	1.9	98.1	1.7	

Fine Aggregate Fineness Modulus: 2.68 FM

Coarseness Factor (x-axis): 59
 ((cumm. Ret 3/8 / cumm. Ret #8) x 100)

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

