

Concrete Mixture Analysis Worksheet

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

Date: 4/30/2024
 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 - Missisauqua	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	1645	2.82	9.35	49.42
Intermediate	300	2.68	1.79	9.48
		1.00	0.00	0.00
Fine	1300	2.68	7.77	41.10
27.14				
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								Gradation Date: <u>4/30/2024</u>			
	Coarse		Intermediate		0		Fine					
	SSD wt., lbs	1645	300	0	1300					Total % Passing	% Cumm. Retained	Retained Sieve, %
Abs. Volume	9.35	1.79	0.00	7.77								
Aggregate % Vol.	49.4	9.5	0.0	41.1								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100	49.4	100	9.5	0.0	0.0	100	41.1	100.0	0.0	0.0	
1 1/2"	100	49.2	100	9.5	0.0	0.0	100	41.1	99.8	0.2	0.2	
1"	100	49.4	100	9.5	0.0	0.0	100	41.1	100.0	0.0	-0.2	
3/4"	79	39.0	100	9.5	0.0	0.0	100	41.1	89.6	10.4	10.4	
1/2"	48	23.7	97	9.2	0.0	0.0	100	41.1	74.0	26.0	15.6	
3/8"	22	10.9	83	7.9	0.0	0.0	100	41.1	59.8	40.2	14.2	
# 4	5	2.5	16	1.5	0.0	0.0	99	40.7	44.7	55.3	15.2	
# 8	4	2.0	4	0.4	0.0	0.0	83	34.1	36.5	63.5	8.2	
# 16	3	1.5	3	0.3	0.0	0.0	66	27.1	28.9	71.1	7.6	
# 30	3	1.5	2	0.2	0.0	0.0	49	20.1	21.8	78.2	7.1	
# 50	3	1.5	2	0.2	0.0	0.0	23	9.5	11.1	88.9	10.7	
# 100	2	1.0	2	0.2	0.0	0.0	5	2.1	3.2	96.8	7.9	
# 200	2	1.0	2	0.2	0.0	0.0	1	0.4	1.6	98.4	1.6	

Fine Aggregate Fineness Modulus: 2.75 FM

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

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

