

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 #: 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 - 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	423	3.1	2.19	
GGBFS	141	2.91	0.78	
Coarse	1640	2.82	9.32	49.98
Intermediate	300	2.68	1.79	9.62
		1.00	0.00	0.00
Fine	1260	2.68	7.53	40.40
27.16				
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>4/30/2024</u>			
	Coarse		Intermediate		0		Fine					
	SSD wt., lbs	1640	300	0	1260					Total % Passing	% Cumm. Retained	Retained Sieve, %
Abs. Volume	9.32	1.79	0.00	7.53								
Aggregate % Vol.	50.0	9.6	0.0	40.4								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100	50.0	100	9.6	0.0	0.0	100	40.4	100.0	0.0	0.0	
1 1/2"	100	49.8	100	9.6	0.0	0.0	100	40.4	99.8	0.2	0.2	
1"	100	50.0	100	9.6	0.0	0.0	100	40.4	100.0	0.0	-0.2	
3/4"	79	39.5	100	9.6	0.0	0.0	100	40.4	89.5	10.5	10.5	
1/2"	48	24.0	97	9.3	0.0	0.0	100	40.4	73.7	26.3	15.8	
3/8"	22	11.0	83	8.0	0.0	0.0	100	40.4	59.4	40.6	14.3	
# 4	5	2.5	16	1.5	0.0	0.0	99	40.0	44.0	56.0	15.3	
# 8	4	2.0	4	0.4	0.0	0.0	83	33.5	35.9	64.1	8.1	
# 16	3	1.5	3	0.3	0.0	0.0	66	26.7	28.5	71.5	7.5	
# 30	3	1.5	2	0.2	0.0	0.0	49	19.8	21.5	78.5	7.0	
# 50	3	1.5	2	0.2	0.0	0.0	23	9.3	11.0	89.0	10.5	
# 100	2	1.0	2	0.2	0.0	0.0	5	2.0	3.2	96.8	7.8	
# 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)

