

Concrete Mixture Analysis Worksheet

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

Date: 4/23/2024
 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 IL	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
Water	237	1	3.80	
Air, %	6.5		1.76	
			27.16	
Total Cementitious:	564	lbs. or	6.0	bag
Water/Cement Ratio:				0.44
Percent Cementitious Replacement:				25%

GRADATIONS													
	Coarse		Intermediate		0		Fine		Gradation Date: <u>4/23/2024</u>				
	SSD wt., lbs	Abs. Volume	Aggregate % Vol.	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
	1640	9.32	50.0	100	50.0	100	9.6	0	0.0	100.0	0.0	0.0	
				100	49.8	100	9.6	0	0.0	99.8	0.2	0.2	
				100	50.0	100	9.6	0	0.0	100.0	0.0	-0.2	
				78	39.0	100	9.6	0	0.0	89.0	11.0	11.0	
				47	23.5	96	9.2	0	0.0	73.1	26.9	15.9	
				22	11.0	82	7.9	0	0.0	59.3	40.7	13.8	
				4	2.0	15	1.4	0	0.0	43.4	56.6	15.8	
				3	1.5	4	0.4	0	0.0	35.4	64.6	8.0	
				3	1.5	3	0.3	0	0.0	28.5	71.5	7.0	
				3	1.5	2	0.2	0	0.0	21.5	78.5	7.0	
				3	1.5	2	0.2	0	0.0	11.4	88.6	10.1	
				2	1.0	2	0.2	0	0.0	3.2	96.8	8.2	
				2	1.0	2	0.2	0	0.0	1.7	98.3	1.6	

Fine Aggregate Fineness Modulus: 2.74 FM

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

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

