

## 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 #: 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 <sup>3</sup>	% Vol.
Cement	395	3.1	2.04	
GGBFS	131	2.91	0.72	
Coarse	1650	2.82	9.38	49.89
Intermediate	290	2.68	1.73	9.23
		1.00	0.00	0.00
Fine	1285	2.68	7.68	40.88
27.02				
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>6/4/2024</u>			
	Coarse		Intermediate		0		Fine					
	SSD wt., lbs	1650	290	0	1285					Total % Passing	% Cumm. Retained	Retained Sieve, %
Abs. Volume	9.38	1.73	0.00	7.68								
Aggregate % Vol.	49.9	9.2	0.0	40.9								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100	49.9	100	9.2	0.0	0.0	100	40.9	100.0	0.0	0.0	
1 1/2"	100	49.7	100	9.2	0.0	0.0	100	40.9	99.8	0.2	0.2	
1"	100	49.9	100	9.2	0.0	0.0	100	40.9	100.0	0.0	-0.2	
3/4"	89	44.4	100	9.2	0.0	0.0	100	40.9	94.5	5.5	5.5	
1/2"	51	25.4	95	8.8	0.0	0.0	100	40.9	75.1	24.9	19.4	
3/8"	23	11.5	85	7.8	0.0	0.0	100	40.9	60.2	39.8	14.9	
# 4	3	1.5	22	2.0	0.0	0.0	100	40.9	44.4	55.6	15.8	
# 8	2	1.0	5	0.5	0.0	0.0	86	35.2	36.6	63.4	7.8	
# 16	1	0.5	3	0.3	0.0	0.0	71	29.0	29.8	70.2	6.8	
# 30	1	0.5	2	0.2	0.0	0.0	53	21.7	22.4	77.6	7.5	
# 50	1	0.5	2	0.2	0.0	0.0	24	9.8	10.5	89.5	11.9	
# 100	1	0.5	2	0.2	0.0	0.0	5	2.0	2.7	97.3	7.8	
# 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): 37  
(Pass #8 + Adjustment Factor)

