

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P11**

Sample Date: **9/2/24**

Dates Test Represents: **9/3/2024** through **9/9/2024**

Concrete Grade: **P1M, 3500HP**

Contractor: _____

MDOT No.: _____



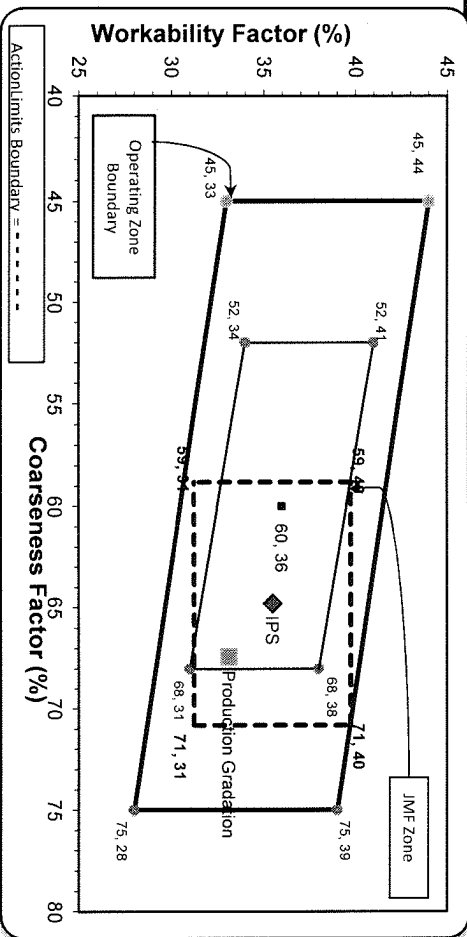
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

Aggr. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	920	5.63	2.62	30.0
N2S	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

Sieve	CA	IA	N2S	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.7	100.0	100.0	99.0	1.0	1.0
1"	32.0	100.0	100.0	79.0	20.0	21.0
3/4"	7.6	99.6	100.0	71.3	7.7	28.7
1/2"	2.4	76.2	100.0	62.7	8.6	37.3
3/8"	1.9	50.9	100.0	54.9	7.7	45.1
#4	1.8	9.4	95.8	40.8	14.1	59.2
#8	1.7	3.3	80.9	33.1	7.7	66.9
#16	1.7	2.4	65.7	26.9	6.2	73.1
#30	1.6	2.2	49.5	20.5	6.4	79.5
#50	1.6	2.1	26.0	11.3	9.2	88.7
#100	1.5	1.9	6.7	3.7	7.6	96.3
LBW	1.2	1.5	0.8	1.1	2.5	98.9

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **67** Workability Factor: **33**



Initial Production Sample (IPS)

Coarseness Factor: **65** Workability Factor: **36**

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when
 a 2" max. size (nom. Max. 1.5") aggregate is used.

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Thursday, September 5, 2024

Sample Id	Plant	Product	Specification	Sample Type	Time
674952066	S11	7919 COARSE AGG P1M LS	Coarse Agg P1M LS Target	QA	16:14
-667669438	S11	1051 6AA LS	6AA LS	QA	16:15
-674897218	S11	1067 26A Mod LS	26A Mod LS Spec	QA	16:16
-367922331	S11	7920 INTERMED AGG P1M LS	Intermed Agg P1M LS Target	QA	16:16
-674933763	S11	1022 2NS GR	2NS GR Spec	QA	16:17
2" (50mm)					100.0
1 1/2" (37.5mm)					96.7
1" (25mm)					32.0
3/4" (19mm)					7.6
1/2" (12.5mm)					2.4
3/8" (9.5mm)					1.9
#4 (4.75mm)					1.8
#8 (2.36mm)					1.7
#16 (1.18mm)					1.7
#30 (.6mm)					1.6
#50 (.3mm)					1.6
#100 (.15mm)					1.5
#200 (75µm)					1.3
Pan					0.0
FM					0.0
Wash Loss (#200/75µm)					1.2
Total Moisture					0.09
					1.1
					2.42
					1.1
					2.15
					1.5
					1.53
					100.0
					50.9
					9.4
					80.9
					65.7
					49.5
					26.0
					6.7
					1.1
					0.0
					2.75
					0.8
					3.76