

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P11

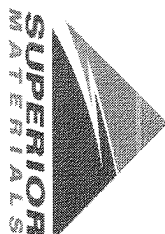
Sample Date: 5/27/24

Dates Test Represents: 5/28/2024 through 6/3/2024

Concrete Grade: S2M, 3500HP

Contractor: _____

MDOT No.: _____



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

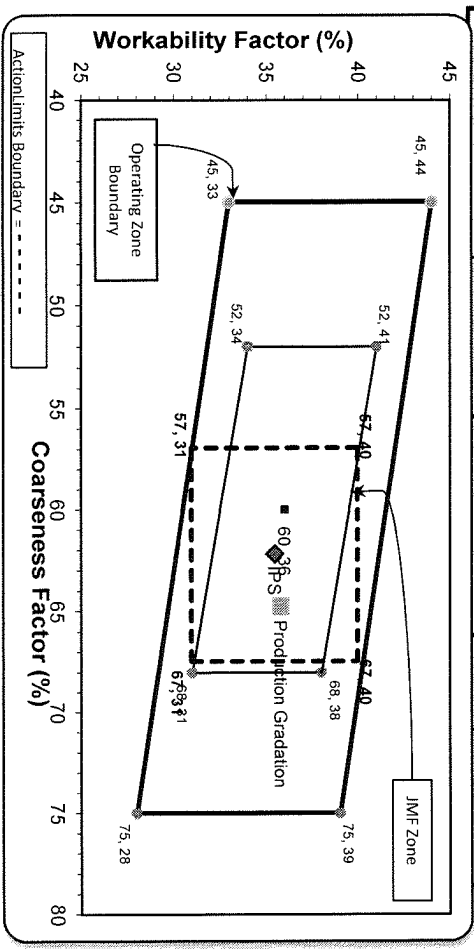
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1450	8.87	2.62	47.5
26A	71-47	Presque Isle	370	2.26	2.62	12.1
ZNS	95-013	Smelter Bay	1230	7.44	2.65	40.3
		Total Wt	3050	18.57		100.0

Sieve	% Retained	Cumulative % Retained
2"	0.0	0.0
1.5"	0.0	0.0
1"	1.5	1.5
3/4"	12.1	13.5
1/2"	18.9	32.5
3/8"	9.1	41.6
#4	16.4	58.0
#8	6.2	64.2
#16	6.4	70.6
#30	8.1	78.7
#50	10.8	89.5
#100	6.7	96.2
LBW	2.4	98.6

*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 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

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



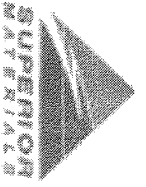
Initial Production Sample (IPS)

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

Coarseness Factor: **62** Workability Factor: **35**

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Wednesday, May 29, 2024

Sample Id - 674911351

Plant S11

-674970944

S11

-1989622873

S11

-674940198

S11

-1989640948

S11

Product
7919
COARSE AGG
P1M LS

7920
INTERMED AGG
P1M LS

1067
26A Mod LS

1051
6AA LS

1022
ZNS GR

Specification
Coarse Agg P1M
LS Target

Intermed Agg P1M
LS Target

26A Mod LS Spec

6AA LS

ZNS GR Spec

Sample Type
QA

QA

QA

QA

QA

Time

08:15

08:25

08:30

08:35

2" (50mm)	100.0	100.0	100.0	100.0	
1 1/2" (37.5mm)	92.6	100.0	100.0	100.0	
1" (25mm)	23.6	100.0	100.0	96.9	
3/4" (19mm)	3.2	95.9	100.0	71.5	
1/2" (12.5mm)	1.8	66.6	88.8	34.5	100.0
3/8" (9.5mm)	1.7	42.1	69.2	20.4	95.9
#4 (4.75mm)	1.6	8.3	9.5	4.6	84.4
#8 (2.36mm)	1.6	3.2	3.1	2.9	69.4
#16 (1.18mm)	1.5	2.4	2.2	2.4	49.5
#30 (.6mm)	1.5	2.2	1.9	2.3	22.9
#50 (.3mm)	1.5	2.1	1.6	2.2	6.6
#100 (.15mm)	1.4	1.9	1.4	2.0	1.4
#200 (75µm)	1.2	1.8	1.3	1.85	0.0
Pan	0.0	0.0	0.0	0.00	2.71
FM					1.1
Wash Loss (#200/75um)	1.1	1.7	1.2	1.7	1.1
Total Moisture	1.44	3.22	2.60	2.13	4.52