

Aggregate Optimization Chart

Production Gradation Report

PLANT #: 12

Sample Date: 6/3/24

Dates Test Represents: 6/4/2024 through 6/10/2024

Concrete Grade: DM, 4500HP

Contractor: _____

MDOT No.: _____



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

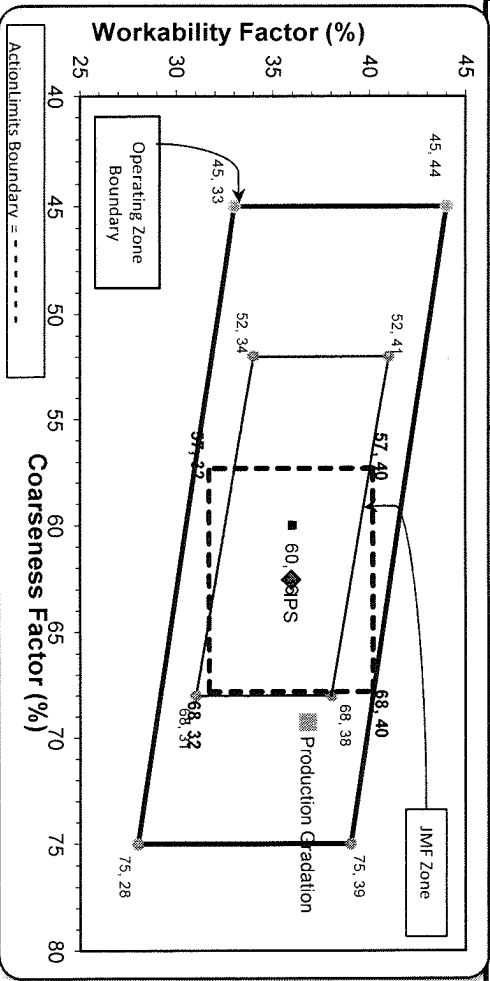
Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
GAA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	150	0.92	2.62	5.2
ZNS	63-115	Ray Rd	1150	6.95	2.65	39.6
			Total Wt:	2905		100.0
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.4	100.0	100.0	99.1	0.9	0.9
3/4"	78.3	100.0	100.0	88.0	11.1	12.0
1/2"	35.1	94.8	100.0	63.9	24.1	36.1
3/8"	19.3	82.3	100.0	54.5	9.4	45.5
#4	4.6	18.3	96.7	41.8	12.7	58.2
#8	3.3	4.8	81.4	34.3	7.5	65.7
#16	2.4	3.1	64.3	26.9	7.4	73.1
#30	2.3	2.5	49.4	21.0	6.0	79.0
#50	2.2	2.2	22.3	10.2	10.8	89.8
#100	2.0	1.8	4.2	2.9	7.3	97.1
LBW	1.8	1.1	0.9	1.4	1.5	98.6

Verify this number is 100%

*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. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

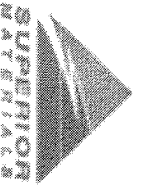
Coarseness Factor:	69	Workability Factor:	34	Adjusted WF	36.8
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Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.0	10.3	11.0
1/2"	70.3	18.7	29.7
3/8"	59.9	10.4	40.1
#4	41.9	18.0	58.1
#8	35.9	6.0	64.1
#16	27.8	8.2	72.2
#30	18.9	8.8	81.1
#50	6.3	12.6	93.7
#100	1.7	4.6	98.3
LBW	1.0	0.7	99.0

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Tuesday, June 4, 2024

Sample Id -674955026

-1989654637

-674979168

Plant Onsite Southfield

Onsite Southfield

Onsite Southfield

Product 6AAL LS

2NS GR

26A Mod LS

Specification 6AAL LS

2NS GR Spec

26A LS Spec

Sample Type QA

QA

QA

Time

10:22

15:23

2" (50mm)	100.0		100.0
1 1/2" (37.5mm)	100.0		100.0
1" (25mm)	98.4		100.0
3/4" (19mm)	78.3		100.0
1/2" (12.5mm)	35.1		94.8
3/8" (9.5mm)	19.3	100.0	82.3
#4 (4.75mm)	4.6	96.7	18.3
#8 (2.36mm)	3.3	81.4	4.8
#16 (1.18mm)	2.4	64.3	3.1
#30 (.6mm)	2.3	49.4	2.5
#50 (.3mm)	2.2	22.3	2.2
#100 (.15mm)	2.0	4.2	1.8
#200 (75µm)	1.83	1.1	1.3
Pan	0.00	0.0	0.0
FM		2.82	
Wash Loss (#200/75µm)	1.8	0.9	1.1
Total Moisture	2.50	3.13	2.19

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: **6/3/24**

Dates Test Represents: **6/4/2024** through **6/10/2024**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
6AA	58-003	Stonoco	1400	8.34	2.69	47.5
26A	58-003	Stonoco	400	2.38	2.69	13.6
2NS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt						2950
						17.68
						100.0

Verify this number is 100%

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	80.5	100.0	100.0	90.7	9.3	9.3
1/2"	41.3	99.5	100.0	72.1	18.7	27.9
3/8"	18.3	85.7	100.0	59.3	12.8	40.7
#4	3.4	9.6	98.8	41.4	17.9	58.6
#8	1.5	3.2	85.3	34.4	7.0	65.6
#16	1.2	2.4	68.9	27.8	6.6	72.2
#30	1.2	2.1	49.6	20.2	7.6	79.8
#50	1.1	2.0	20.5	8.8	11.4	91.2
#100	1.1	1.9	4.1	2.4	6.4	97.6
LBW	0.9	1.7	0.8	1.0	1.4	99.0

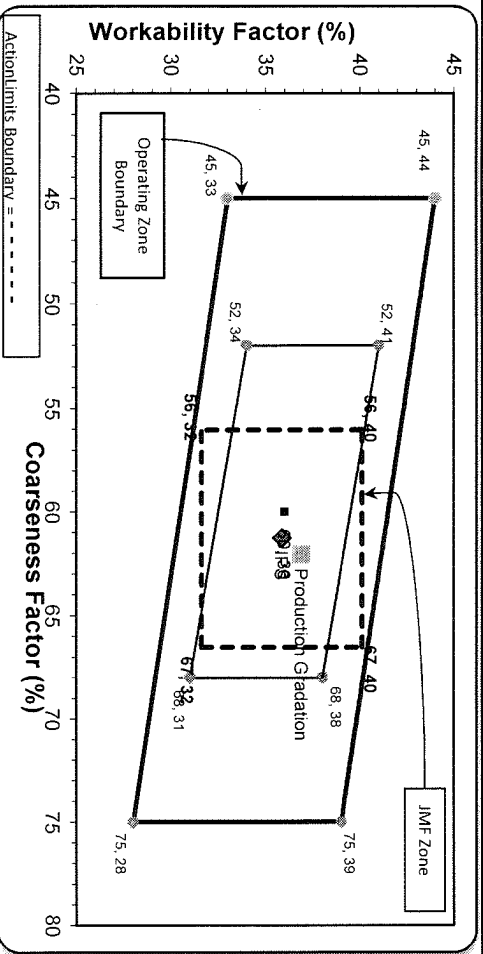
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max. norm. max. #100 and #200 sieves.
 **Retained must be at least 4% for each sieve except max. norm. max., #100 and #200 sieves.
 ***Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

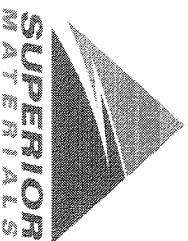
Coarseness Factor: **62** Workability Factor: **34** Adjusted WF: **36.9**

Initial Production Sample (IPS)

Coarseness Factor: **61** Workability Factor: **36**



Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3



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

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Tuesday, June 4, 2024

Sample Id	Plant	Product	Specification	Sample Type	Time
-1989625662	S102 Superior Novi	1051 6AA LS	6AA LS	QA	09:20
-674987420	S102 Superior Novi	1067 26A Mod LS	26A Mod LS Spec	QA	09:21
-674894439	S102 Superior Novi	1022 2NS GR	2NS GR Spec	QA	15:22
2" (50mm)					100.0
1 1/2" (37.5mm)					100.0
1" (25mm)					100.0
3/4" (19mm)					80.5
1/2" (12.5mm)					41.3
3/8" (9.5mm)					18.3
#4 (4.75mm)					3.4
#8 (2.36mm)					1.5
#16 (1.18mm)					1.2
#30 (.6mm)					1.2
#50 (.3mm)					1.1
#100 (.15mm)					1.1
#200 (75µm)					0.99
Pan					0.00
FM					
Wash Loss (#200/75µm)					0.9
Total Moisture					2.31
					100.0
					100.0
					100.0
					100.0
					99.5
					85.7
					9.6
					3.2
					2.4
					2.1
					2.0
					1.9
					1.8
					0.0
					2.73
					0.8
					3.28