

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

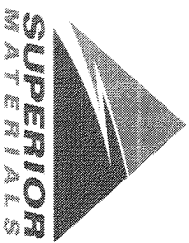
Sample Date: **5/27/24**

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

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 %
6AA	58-003	Stoneco	1600	9.53	2.69	54.2
26A	58-003	Stoneco	200	1.19	2.69	6.8
2NS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt			2950	17.68		100.0

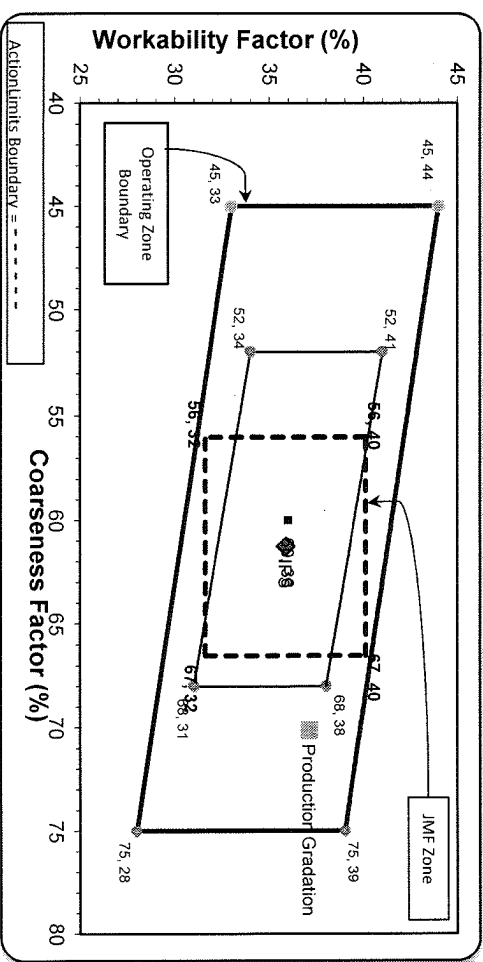
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	81.9	100.0	100.0	90.2	9.8	9.8
1/2"	40.1	98.7	100.0	67.4	22.8	32.6
3/8"	17.3	85.2	100.0	54.1	13.3	45.9
#4	3.1	7.2	99.1	40.8	13.3	59.2
#8	1.3	2.8	86.5	34.6	6.2	65.4
#16	1.1	2.1	71.1	28.5	6.2	71.5
#30	1.0	1.8	52.6	21.2	7.3	78.8
#50	1.0	1.7	21.4	9.0	12.2	91.0
#100	0.9	1.6	4.2	2.2	6.8	97.8
LBW	0.7	1.5	0.7	0.8	1.5	99.2

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	70	Workability Factor:	35	Adjusted WF
				37.1

Initial Production Sample (IPS)

Coarseness Factor:	61
	36

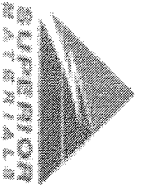


Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

*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.

PREPARED BY:
SM, LLC Technical Service

Approved By:



Daily Summary Report

Date Tuesday, May 28, 2024

Sample Id	Plant	Product	Specification	Sample Type	Time
-1989616402	S102 Superior Novi	1022 ZNS GR	ZNS GR Spec	QA	09:00
-674892962	S102 Superior Novi	1067 26A Mod LS	26A Mod LS Spec	QA	09:01
-674961410	S102 Superior Novi	7920 INTERMED AGG P1M LS	Intermed Agg P1M LS Target	QA	09:02
-674934835	S102 Superior Novi	1051 6AA LS	6AA LS	QA	09:03
-674937356	S102 Superior Novi	7919 COARSE AGG P1M LS	Coarse Agg P1M LS Target	QA	18:00
2" (50mm)					100.0
1 1/2" (37.5mm)					100.0
1" (25mm)					100.0
3/4" (19mm)					100.0
1/2" (12.5mm)					98.7
3/8" (9.5mm)					85.2
#4 (4.75mm)					7.2
#8 (2.36mm)					2.8
#16 (1.18mm)					2.1
#30 (.6mm)					1.8
#50 (.3mm)					1.7
#100 (.15mm)					1.6
#200 (75µm)					1.6
Pan					0.0
FM					2.65
Wash Loss (#200/75µm)					1.5
Total Moisture					3.51
					2.32
					2.73
					2.80
					1.34

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: **5/27/24**

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

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 %
6AA	58-003	Stoneco	1600	9.53	2.69	54.2
26A	58-003	Stoneco	200	1.19	2.69	6.8
2NS	63-114	Highland	1150	6.95	2.65	39.0
		Total Wt	2950	17.68		100.0

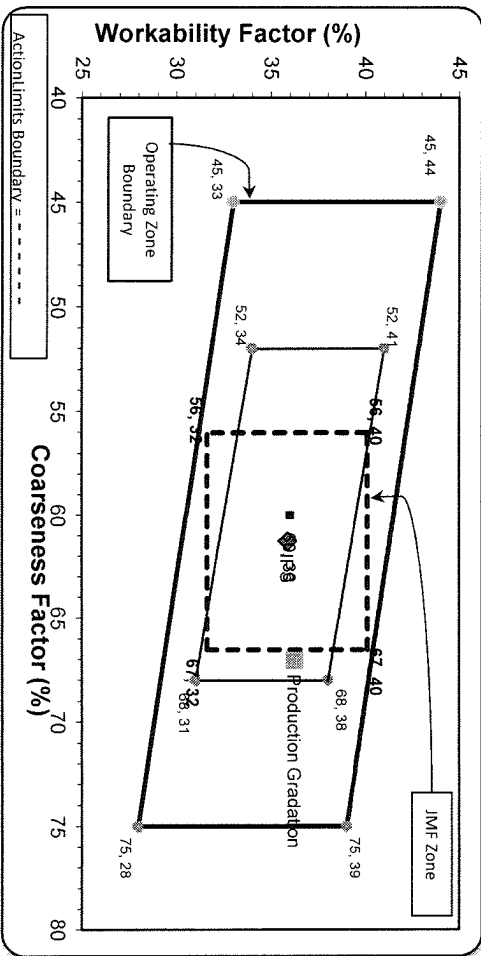
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	81.7	100.0	100.0	90.1	9.9	9.9
1/2"	41.5	99.7	100.0	68.3	21.8	31.7
3/8"	19.4	89.7	100.0	55.6	12.7	44.4
#4	3.9	5.7	98.4	40.9	14.7	59.1
#8	1.9	1.9	83.6	33.7	7.1	66.3
#16	1.6	1.5	65.2	26.4	7.4	73.6
#30	1.4	1.3	45.9	18.7	7.6	81.3
#50	1.4	1.2	16.6	7.3	11.4	92.7
#100	1.3	1.1	2.5	1.8	5.6	98.2
LBW	1.1	1.0	0.4	0.8	0.9	99.2

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	67	Workability Factor:	34	Adjusted WF
				36.2

Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	36

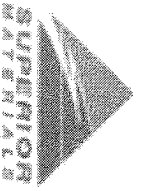


Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

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 *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.

PREPARED BY:
SM, LLC Technical Service

Approved BY:



Daily Summary Report

Date Wednesday, May 29, 2024

Sample Id	-674907930	-24351471	-1989621136
Plant	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton
Product	1051 6AA LS	1022 2NS GR	1067 26A Mod LS

Specification	6AA LS	2NS GR Spec	26A Mod LS Spec
Sample Type	QA	QA	QA
Time	12:49	12:50	12:50

2" (50mm)	100.0		100.0
1 1/2" (37.5mm)	100.0		100.0
1" (25mm)	99.4		100.0
3/4" (19mm)	81.7		100.0
1/2" (12.5mm)	41.5		99.7
3/8" (9.5mm)	19.4	100.0	89.7
#4 (4.75mm)	3.9	98.4	5.7
#8 (2.36mm)	1.9	83.6	1.9
#16 (1.18mm)	1.6	65.2	1.5
#30 (.6mm)	1.4	45.9	1.3
#50 (.3mm)	1.4	16.6	1.2
#100 (.15mm)	1.3	2.5	1.1
#200 (75µm)	1.23	0.5	1.0
Pan	0.00	0.0	0.0
FM		2.88	
Wash Loss (#200/75µm)	1.1	0.4	1.0
Total Moisture	2.44	3.21	2.86