

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-102

Sample Date: 5/20/24

Dates Test Represents: 5/21/2024 through 5/27/2024

Concrete Grade: DM, 4500HP

Contractor: _____

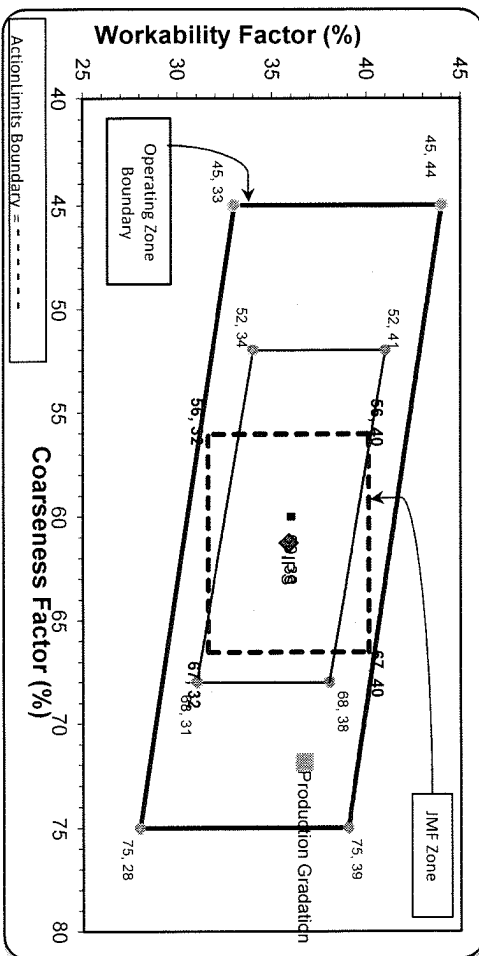
MDOT No.: _____

Aggr. 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

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"	77.8	100.0	100.0	88.0	12.0	12.0
1/2"	31.6	100.0	100.0	62.9	25.1	37.1
3/8"	14.4	87.1	100.0	52.7	10.2	47.3
#4	2.6	7.2	98.6	40.3	12.4	59.7
#8	1.5	2.3	85.2	34.2	6.2	65.8
#16	1.3	1.8	68.8	27.6	6.5	72.4
#30	1.2	1.6	49.8	20.2	7.5	79.8
#50	1.2	1.5	19.6	8.4	11.8	91.6
#100	1.1	1.5	3.3	2.0	6.4	98.0
LBW	0.9	1.3	0.5	0.8	1.2	99.2

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

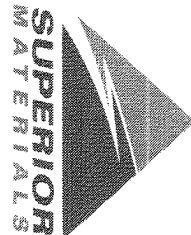
Coarseness Factor:	72	Workability Factor:	34	Adjusted WF
				36.7



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

Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	36

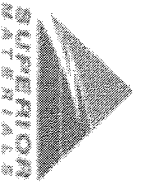


Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

*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 Monday, May 20, 2024

Sample Id	Plant	Product	Specification	Sample Type	Time
-1989671042	S102 Superior Novi	1022 2NS GR	2NS GR Spec	QA	11:03
-674935586	S102 Superior Novi	1051 6AA LS	6AA LS	QA	11:03
-1989671044	S102 Superior Novi	1067 26A Mod LS	26A Mod LS Spec	QA	11:03
2" (50mm)					100.0
1 1/2" (37.5mm)					100.0
1" (25mm)					100.0
3/4" (19mm)					77.8
1/2" (12.5mm)					31.6
3/8" (9.5mm)					14.4
#4 (4.75mm)					2.6
#8 (2.36mm)					1.5
#16 (1.18mm)					1.3
#30 (.6mm)					1.2
#50 (.3mm)					1.2
#100 (.15mm)					1.1
#200 (75µm)					1.03
Pan					0.0
FM					2.75
Wash Loss (#200/75µm)					0.9
Total Moisture					3.99
					2.51
					1.3
					3.38

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

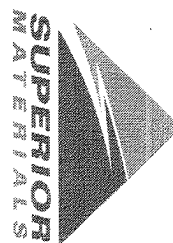
Sample Date: **5/20/24**

Dates Test Represents: **5/21/2024** through **5/27/2024**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____



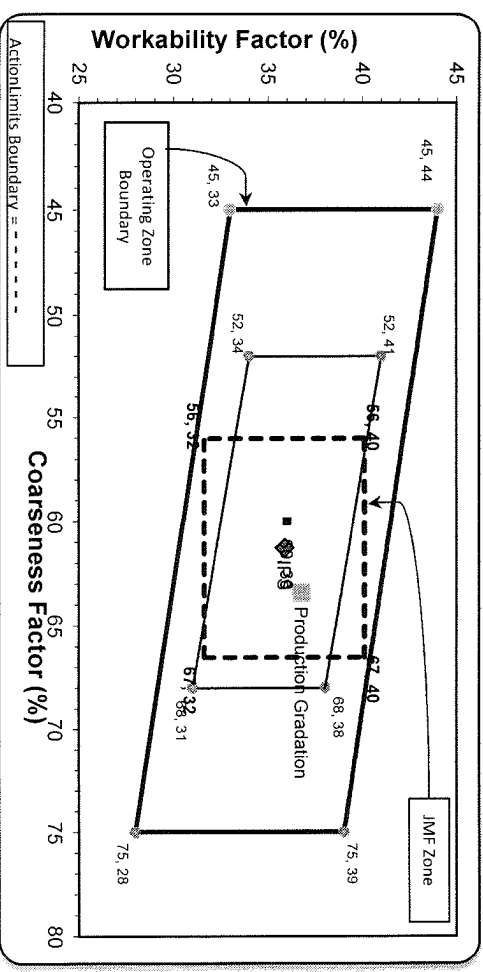
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

Aggr. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	58-003	Stonoco	1600	9.53	2.69	54.2
26A	58-003	Stonoco	200	1.19	2.69	6.8
ZNS	63-114	Highland	1150	6.95	2.65	39.0
		Total Wt	2950	17.68		100.0

Sieve	6AA	26A	ZNS	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"	84.8	100.0	100.0	100.0	8.2	8.2
1/2"	47.0	100.0	100.0	100.0	20.5	28.7
3/8"	24.2	91.6	100.0	100.0	12.9	41.7
#4	3.4	10.7	98.9	100.0	17.2	58.9
#8	1.7	2.5	85.1	100.0	6.9	65.7
#16	1.5	1.9	69.5	100.0	6.2	72.0
#30	1.4	1.7	52.6	100.0	6.7	78.6
#50	1.4	1.6	23.0	100.0	11.5	90.2
#100	1.3	1.5	2.8	100.0	7.9	98.1
LBW	1.2	1.4	0.4	100.0	1.0	99.1

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **63** Workability Factor: **34** Adjusted WF: **36.8**

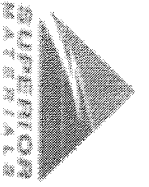


Sieve	Coarseness Factor:	Workability Factor:	Adjusted WF:
2"	61	36	36.8
1.5"	61	36	36.8
1"	61	36	36.8
3/4"	61	36	36.8
1/2"	61	36	36.8
3/8"	61	36	36.8
#4	61	36	36.8
#8	61	36	36.8
#16	61	36	36.8
#30	61	36	36.8
#50	61	36	36.8
#100	61	36	36.8
LBW	61	36	36.8

*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.

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Monday, May 20, 2024

Sample Id	-1989671048	-674896637	-1989671050
Plant	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton
Product	1022 2NS GR	1051 6AA LS	1067 26A Mod LS
Specification	2NS GR Spec	6AA LS	26A Mod LS Spec
Sample Type	QA	QA	QA
Time	10:56	10:56	10:56
2" (50mm)	100.0	100.0	100.0
1 1/2" (37.5mm)	100.0	100.0	100.0
1" (25mm)	100.0	100.0	100.0
3/4" (19mm)	84.8	84.8	100.0
1/2" (12.5mm)	47.0	47.0	100.0
3/8" (9.5mm)	24.2	24.2	91.6
#4 (4.75mm)	3.4	3.4	10.7
#8 (2.36mm)	1.7	1.7	2.5
#16 (1.18mm)	1.5	1.5	1.9
#30 (.6mm)	1.4	1.4	1.7
#50 (.3mm)	23.0	1.4	1.6
#100 (.15mm)	2.8	1.3	1.5
#200 (75µm)	0.6	1.27	1.5
Pan	0.0	0.00	0.0
FM	2.88		
Wash Loss (#200/75um)	0.4	1.2	1.4
Total Moisture	4.65	2.29	3.03