

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

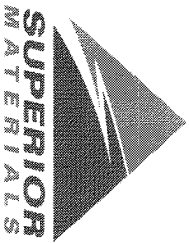
Sample Date: **3/4/24**

Dates Test Represents: **3/5/2024** through **3/11/2024**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____



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

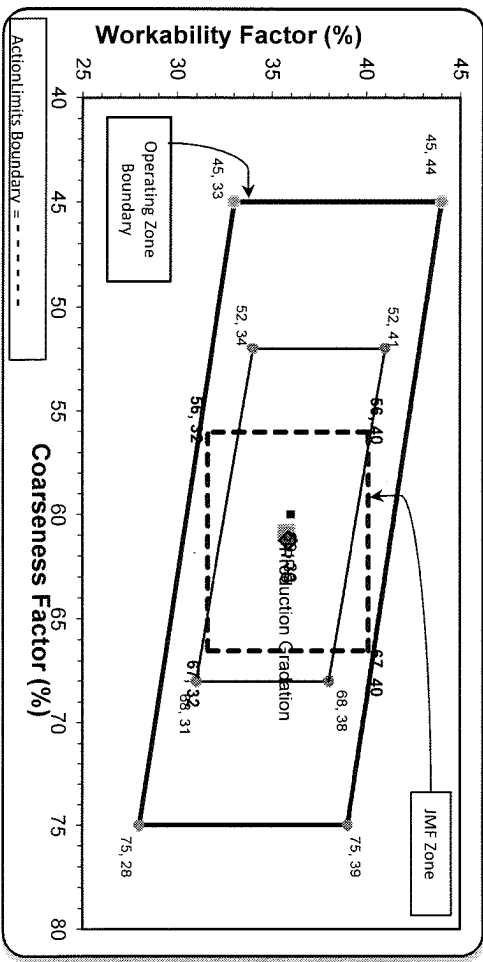
Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	58-003	Stoneco	1400	8.34	2.69	47.5
26A	58-003	Stoneco	400	2.38	2.69	13.6
2NS	63-114	Highland	1150	6.95	2.65	39.0
		Total Wt	2950	17.68		100.0

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"	81.7	100.0	100.0	91.3	8.7	8.7
1/2"	38.1	96.2	100.0	70.1	21.2	29.9
3/8"	18.8	84.5	100.0	59.4	10.7	40.6
#4	4.0	15.2	96.0	41.4	18.0	58.6
#8	2.9	5.5	79.9	33.3	8.1	66.7
#16	2.6	3.7	64.2	26.8	6.5	73.2
#30	2.4	3.2	47.7	20.2	6.6	79.8
#50	2.3	2.9	21.6	9.9	10.3	90.1
#100	2.2	2.8	3.2	2.7	7.2	97.3
LBW	2.0	2.7	0.6	1.5	1.1	98.5

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **61** Workability Factor: **33** Adjusted WF: **35.8**

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

*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:



Plant S102-Superior Novi

Product 1051-6AA LS

Period: 03/03/2024 - 03/09/2024

Name/Title Doug Storey / QC Technician

Report Date 03/09/2024

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	100.0	%	95-100
	3/4" (19mm)	81.7	%	
	1/2" (12.5mm)	38.1	%	30-60
	3/8" (9.5mm)	18.8	%	
	#4 (4.75mm)	4.0	%	0-8
	#8 (2.36mm)	2.9	%	
	#16 (1.18mm)	2.6	%	
	#30 (.6mm)	2.4	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	2.10	%	
	Wash Loss (#200/75um)	2.0	%	0-2
	Total Moisture	3.90	%	



Plant S102-Superior Novi

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 03/03/2024 - 03/09/2024

Report Date 03/09/2024

Procedure	Sieve/Test	Result	Unit	26A Mod LS Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	100-100
	1/2" (12.5mm)	96.2	%	95-100
	3/8" (9.5mm)	84.5	%	60-95
	#4 (4.75mm)	15.2	%	5-30
	#8 (2.36mm)	5.5	%	0-12
	#16 (1.18mm)	3.7	%	
	#30 (.6mm)	3.2	%	
	#50 (.3mm)	2.9	%	
	#100 (.15mm)	2.8	%	
	#200 (75µm)	2.7	%	
	Wash Loss (#200/75um)	2.7	%	0-3
	Total Moisture	4.99	%	



Plant S102-Superior Novi

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 03/03/2024 - 03/09/2024

Report Date 03/09/2024

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.0	%	95-100
	#8 (2.36mm)	79.9	%	65-95
	#16 (1.18mm)	64.2	%	35-75
	#30 (.6mm)	47.7	%	20-55
	#50 (.3mm)	21.6	%	10-30
	#100 (.15mm)	3.2	%	0-10
	#200 (75µm)	0.6	%	
	FM	2.87		2.6-3
	Wash Loss (#200/75um)	0.6	%	0-3
	Total Moisture	5.87	%	