

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-102**

Sample Date: **7/10/23**

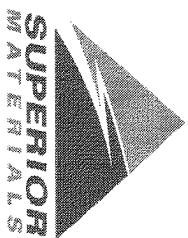
Dates Test Represents: **7/11/2023**

through **7/17/2023**

Concrete Grade: **DM, 4500HP**

Contractor: \_\_\_\_\_

MDOT No.: \_\_\_\_\_



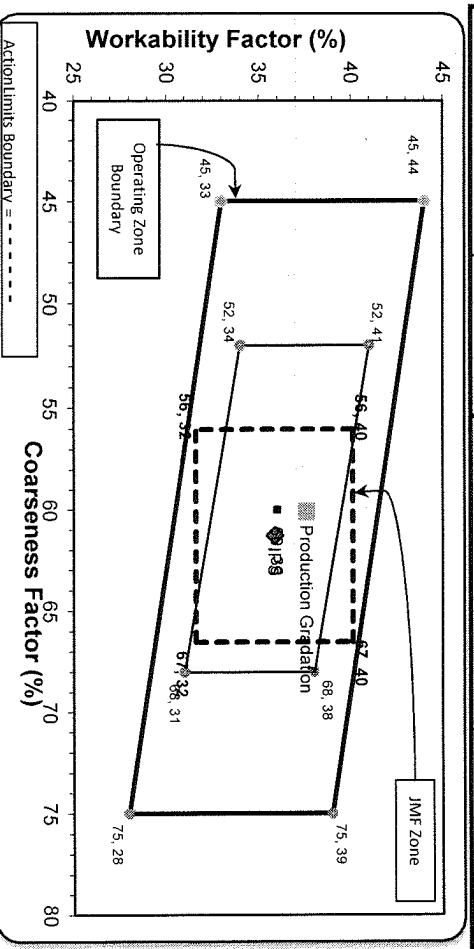
**Superior Materials, LLC**  
30701 W. 10 Mile Rd.  
Suite 500  
Farmington Hills, MI 48336

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
6AA	58-003	Stoneco	1550	9.23	2.69	52.5
26A	58-003	Stoneco	250	1.49	2.69	8.5
2NS	81-019	Pleasant Lake	1150	6.95	2.65	39.0
			<b>Total Wt</b>	<b>2950</b>		<b>100.0</b>

Sieve	% Retained	Cumulative % Retained
2"	0.0	0.0
1.5"	0.0	0.0
1"	1.5	1.5
3/4"	9.8	11.3
1/2"	16.8	28.2
3/8"	10.8	39.0
#4	17.7	56.7
#8	8.2	64.9
#16	7.5	72.5
#30	7.4	79.9
#50	9.8	89.7
#100	6.4	96.1
LBW	2.2	98.4

\*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 8% for the 1" sieve when  
a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation	Batch Plant Gradations	Aggregate Supplier Gradations	Adjusted WF
Coarseness Factor: <b>60</b>	Workability Factor: <b>35</b>		<b>37.6</b>



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

PREPARED BY:  
SM, LLC Technical Service

Approved By: \_\_\_\_\_



Plant S102-Superior Novi

Product 1051-6AA LS

Name/Title Doug Storey / QC Technician

Period: 07/09/2023 - 07/15/2023

Report Date 07/13/2023

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.1	%	95-100
	3/4" (19mm)	78.4	%	
	1/2" (12.5mm)	46.4	%	30-60
	3/8" (9.5mm)	27.3	%	
	#4 (4.75mm)	6.7	%	0-8
	#8 (2.36mm)	3.2	%	
	#16 (1.18mm)	2.4	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.95	%	
	Wash Loss (#200/75um)	1.8	%	0-2
	Total Moisture	4.27	%	



Plant S102-Superior Novi

Product 1067-26A Mod LS

Period: 07/09/2023 - 07/15/2023

Name/Title Doug Storey / QC Technician

Report Date 07/13/2023

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)	99.7	%	95-100
	3/8" (9.5mm)	90.5	%	60-95
	#4 (4.75mm)	13.9	%	5-30
	#8 (2.36mm)	4.6	%	0-12
	#16 (1.18mm)	3.3	%	
	#30 (.6mm)	2.9	%	
	#50 (.3mm)	2.6	%	
	#100 (.15mm)	2.5	%	
	#200 (75µm)	2.3	%	
	Wash Loss (#200/75um)	2.3	%	0-3
	Total Moisture	3.02	%	



Plant S102-Superior Novi

Product 1022-2NS GR

Period: 07/09/2023 - 07/15/2023

Name/Title Doug Storey / QC Technician

Report Date 07/13/2023

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	99.0	%	95-100
	#8 (2.36mm)	84.7	%	65-95
	#16 (1.18mm)	66.7	%	35-75
	#30 (.6mm)	48.0	%	20-55
	#50 (.3mm)	23.0	%	10-30
	#100 (.15mm)	6.7	%	0-10
	#200 (75µm)	1.8	%	
	FM	2.72		2.6-3
	Wash Loss (#200/75um)	1.3	%	0-3
	Total Moisture	3.17	%	