

# Aggregate Optimization Chart

# Production Gradation Report

**PLANT #:** P-102

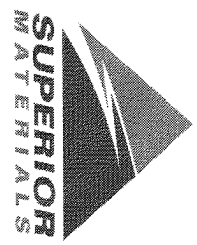
Sample Date: 4/3/23

Dates Test Represents: 4/4/2023 through 4/10/2023

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	1500	8.94	2.69	50.8	
26A	58-003	Stoneco	300	1.79	2.69	10.2	
2NS	81-019	Pleasant Lake	1150	6.95	2.65	39.0	
<b>Total Wt:</b>						<b>2950</b>	<b>100.0</b>

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"	89.9	100.0	100.0	94.9	5.1	5.1
1/2"	48.6	99.1	100.0	73.8	21.1	26.2
3/8"	26.5	90.4	100.0	61.7	38.3	38.3
#4	4.4	14.0	96.8	41.4	58.6	58.6
#8	2.0	3.3	82.2	33.4	66.6	66.6
#16	1.5	1.9	65.4	26.5	73.5	73.5
#30	1.3	1.6	47.8	19.5	80.5	80.5
#50	1.2	1.4	22.7	9.6	90.4	90.4
#100	1.0	1.3	6.1	3.0	97.0	97.0
LBW	0.8	1.2	1.4	1.1	98.9	98.9

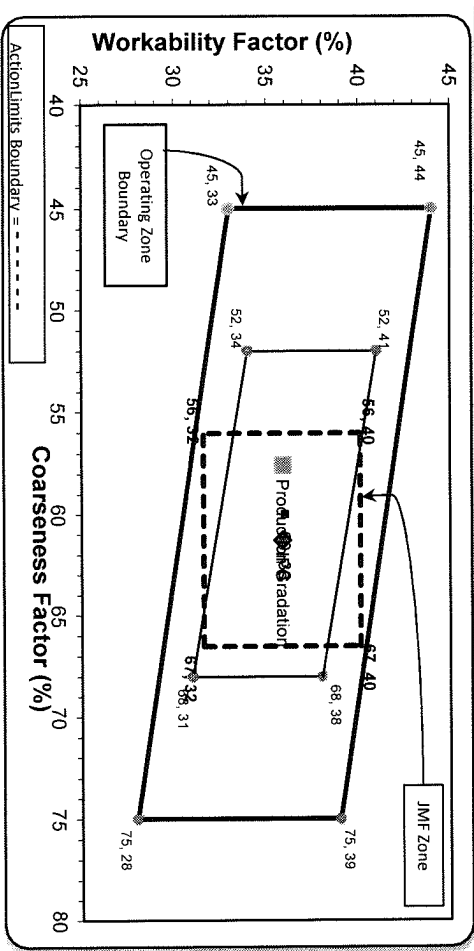
\*Maximum % Retained must be above the 3/8" sieve.  
\*Any two adjacent sieves must equal 10% except max.  
nom. max., #100 and #200 sieves.  
\*\*Retained must be at least 4% for each sieve except max.  
nom. max., #100 and #200 sieves.  
\*\*\*Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. 1.5") aggregate is used.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Coarseness Factor: 58 Workability Factor: 33 Adjusted WF: 35.9

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

PREPARED BY: SM, LLC Technical Service

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



Plant S102-Superior Novi

Product 1051-6AA LS

Name/Title Doug Storey / QC Technician

Period: 04/02/2023 - 04/08/2023

Report Date 04/07/2023

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)	89.9	%	
	1/2" (12.5mm)	48.6	%	30-60
	3/8" (9.5mm)	26.5	%	
	#4 (4.75mm)	4.4	%	0-8
	#8 (2.36mm)	2.0	%	
	#16 (1.18mm)	1.5	%	
	#30 (.6mm)	1.3	%	
	#50 (.3mm)	1.2	%	
	#100 (.15mm)	1.0	%	
	#200 (75µm)	0.93	%	
	Wash Loss (#200/75um)	0.8	%	0-2
	Total Moisture	3.52	%	



Plant S102-Superior Novi

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 04/02/2023 - 04/08/2023

Report Date 04/07/2023

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)	99.1	%	95-100
	3/8" (9.5mm)	90.4	%	60-95
	#4 (4.75mm)	14.0	%	5-30
	#8 (2.36mm)	3.3	%	0-12
	#16 (1.18mm)	1.9	%	
	#30 (.6mm)	1.6	%	
	#50 (.3mm)	1.4	%	
	#100 (.15mm)	1.3	%	
	#200 (75µm)	1.2	%	
	Wash Loss (#200/75um)	1.2	%	0-3
	Total Moisture	4.95	%	



Plant S102-Superior Novi  
Product 1022-2NS GR  
Period: 04/02/2023 - 04/08/2023

Name/Title Doug Storey / QC Technician  
Report Date 04/07/2023

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.8	%	95-100
	#8 (2.36mm)	82.2	%	65-95
	#16 (1.18mm)	65.4	%	35-75
	#30 (.6mm)	47.8	%	20-55
	#50 (.3mm)	22.7	%	10-30
	#100 (.15mm)	6.1	%	0-10
	#200 (75µm)	1.7	%	
	FM	2.79		2.6-3
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	5.07	%	