

# Aggregate Optimization Chart

## Production Gradation Report

PLANT #: **P-102**

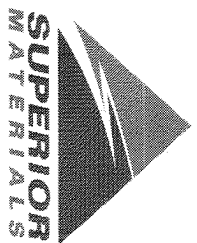
Sample Date: **3/25/24**

Dates Test Represents: **3/26/2024** through **4/1/2024**

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 <sup>3</sup>	Specific Gravity	Contribution %
6AA	58-003	Stoneco	1450	8.64	2.69	49.2
26A	58-003	Stoneco	350	2.09	2.69	11.9
ZNS	63-114	Highland	1150	6.95	2.65	39.0
		<b>Total Wt</b>	<b>2950</b>			<b>100.0</b>

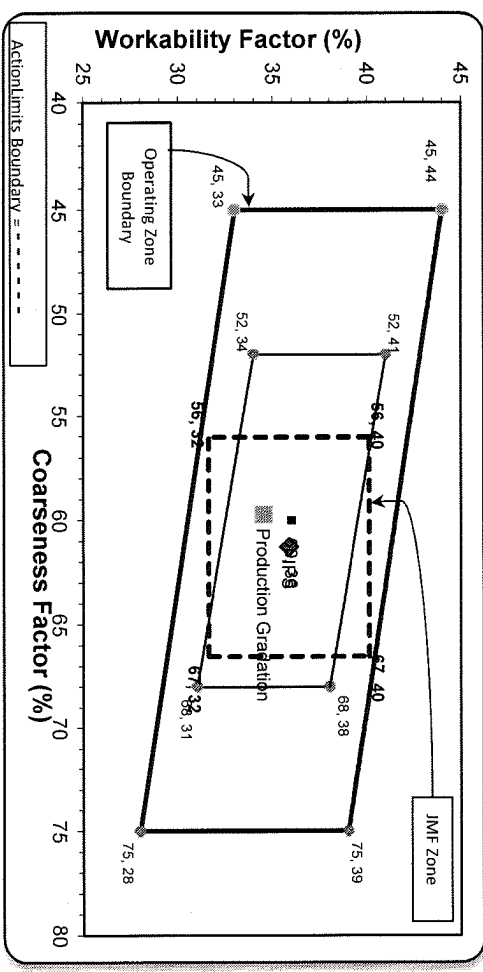
Sieve	6AA	26A	ZNS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	84.9	100.0	100.0	92.6	7.4	7.4
1/2"	42.2	98.7	100.0	71.4	28.6	28.6
3/8"	20.1	89.0	100.0	59.4	40.6	40.6
#4	4.0	17.5	96.1	41.5	58.5	58.5
#8	1.7	6.0	78.2	32.0	68.0	68.0
#16	1.4	3.8	62.2	25.4	74.6	74.6
#30	1.3	3.2	47.3	19.5	80.5	80.5
#50	1.2	2.9	24.2	10.4	89.6	89.6
#100	1.1	2.8	5.2	2.9	97.1	97.1
LBW	1.0	2.7	0.7	1.1	98.9	98.9

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Coarseness Factor: **60** Workability Factor: **32** Adjusted WF: **34.5**

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

Name/Title Doug Storey / QC Technician

Period: 03/24/2024 - 03/30/2024

Report Date 03/29/2024

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)	84.9	%	
	1/2" (12.5mm)	42.2	%	30-60
	3/8" (9.5mm)	20.1	%	
	#4 (4.75mm)	4.0	%	0-8
	#8 (2.36mm)	1.7	%	
	#16 (1.18mm)	1.4	%	
	#30 (.6mm)	1.3	%	
	#50 (.3mm)	1.2	%	
	#100 (.15mm)	1.1	%	
	#200 (75µm)	1.07	%	
	Wash Loss (#200/75um)	1.0	%	0-2
	Total Moisture	3.39	%	



Plant S102-Superior Novi

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 03/24/2024 - 03/30/2024

Report Date 03/29/2024

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)	98.7	%	95-100
	3/8" (9.5mm)	89.0	%	60-95
	#4 (4.75mm)	17.5	%	5-30
	#8 (2.36mm)	6.0	%	0-12
	#16 (1.18mm)	3.8	%	
	#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	4.95	%	



Plant S102-Superior Novi

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 03/24/2024 - 03/30/2024

Report Date 03/29/2024

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.1	%	95-100
	#8 (2.36mm)	78.2	%	65-95
	#16 (1.18mm)	62.2	%	35-75
	#30 (.6mm)	47.3	%	20-55
	#50 (.3mm)	24.2	%	10-30
	#100 (.15mm)	5.2	%	0-10
	#200 (75µm)	0.9	%	
	FM	2.87		2.6-3
	Wash Loss (#200/75um)	0.7	%	0-3
	Total Moisture	4.66	%	