

# Aggregate Optimization Chart

# Production Gradation Report

**PLANT #:** P-102

**Sample Date:** 2/12/24

**Dates Test Represents:** 2/13/2024 through 2/19/2024

**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 <sup>3</sup>	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
<b>Total Wt</b>			<b>2950</b>	<b>17.68</b>		<b>100.0</b>

Verify this number is 100%

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"	88.7	100.0	100.0	94.6	5.4	5.4
1/2"	42.7	96.0	100.0	72.3	22.4	27.7
3/8"	20.6	82.4	100.0	59.9	12.3	40.1
#4	4.5	15.0	99.1	42.8	17.1	57.2
#8	3.0	5.9	83.7	34.9	7.9	65.1
#16	2.5	3.6	64.0	26.6	8.2	73.4
#30	2.3	2.9	44.2	18.7	7.9	81.3
#50	2.0	2.5	17.7	8.2	10.5	91.8
#100	1.9	2.3	3.6	2.6	5.6	97.4
LBW	1.6	2.0	0.8	1.3	1.3	98.7

\*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.

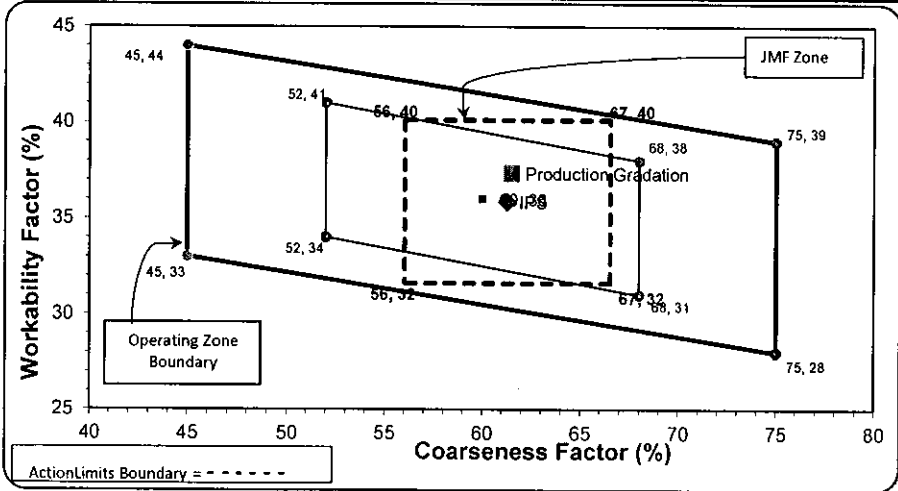
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

**Coarseness Factor:** 62      **Workability Factor:** 35      **Adjusted WF:** 37.4

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: 02/11/2024 - 02/17/2024

Report Date 02/17/2024

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)	88.7	%	
	1/2" (12.5mm)	42.7	%	30-60
	3/8" (9.5mm)	20.6	%	
	#4 (4.75mm)	4.5	%	0-8
	#8 (2.36mm)	3.0	%	
	#16 (1.18mm)	2.5	%	
	#30 (.6mm)	2.3	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.77	%	
	Wash Loss (#200/75µm)	1.6	%	0-2
	Total Moisture	1.85	%	



Plant S102-Superior Novi  
 Product 1067-26A Mod LS  
 Period: 02/11/2024 - 02/17/2024

Name/Title Doug Storey / QC Technician  
 Report Date 02/17/2024

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)	96.0	%	95-100
	3/8" (9.5mm)	82.4	%	60-95
	#4 (4.75mm)	15.0	%	5-30
	#8 (2.36mm)	5.9	%	0-12
	#16 (1.18mm)	3.6	%	
	#30 (.6mm)	2.9	%	
	#50 (.3mm)	2.5	%	
	#100 (.15mm)	2.3	%	
	#200 (75µm)	2.2	%	
	Wash Loss (#200/75µm)	2.0	%	0-3
	Total Moisture	2.99	%	



Plant S102-Superior Novi

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 02/11/2024 - 02/17/2024

Report Date 02/17/2024

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	99.1	%	95-100
	#8 (2.36mm)	83.7	%	65-95
	#16 (1.18mm)	64.0	%	35-75
	#30 (.6mm)	44.2	%	20-55
	#50 (.3mm)	17.7	%	10-30
	#100 (.15mm)	3.6	%	0-10
	#200 (75µm)	0.9	%	
	FM	2.88		2.6-3
	Wash Loss (#200/75um)	0.8	%	0-3
	Total Moisture	2.33	%	