

# 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:** S2M, 3500HP

**Contractor:**

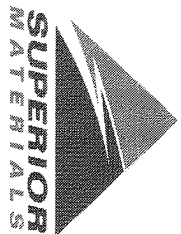
**MIDOT No.:**

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
6AA	58-003	Stoneco	1550	9.23	2.69	50.0
26A	58-003	Stoneco	350	2.09	2.69	11.3
2NS	63-114	Highland	1200	7.26	2.65	38.7
<b>Total Wt.</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"	81.7	100.0	100.0	90.9	9.2	9.2
1/2"	38.1	100.0	100.0	68.6	22.2	31.4
3/8"	18.8	84.5	100.0	57.7	11.0	42.4
#4	4.0	15.2	96.0	40.9	16.8	59.1
#8	2.9	5.5	79.9	33.0	7.9	67.0
#16	2.6	3.7	64.2	26.6	6.4	73.4
#30	2.4	3.2	47.7	20.0	6.5	80.0
#50	2.3	2.9	21.6	9.8	10.2	90.2
#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

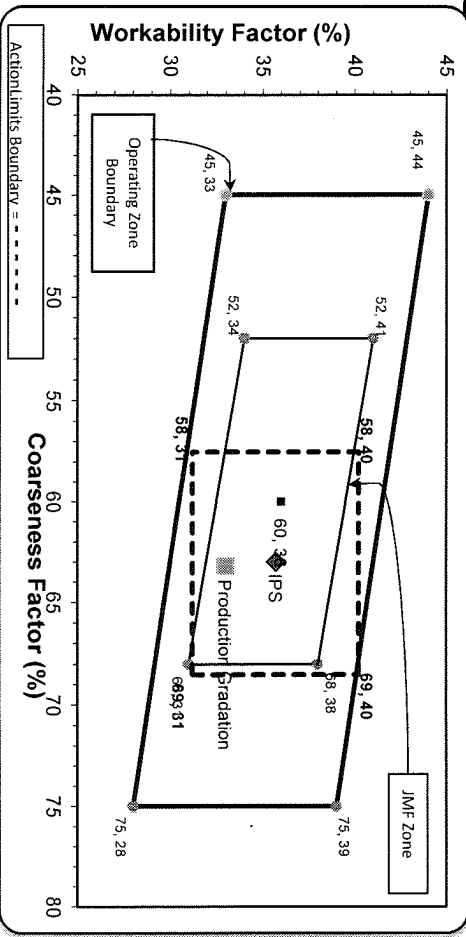
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max.  
 nom. max., #100 and #200 sieves.  
 \*\*% Retained must be at least 4% for each sieve except max.  
 nom. max., #100 and #200 sieves.  
 \*\*\*% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.



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

**Production Gradation**  Batch Plant Gradations  Aggregate Supplier Gradations

**Coarseness Factor:** 63 **Workability Factor:** 33



**Initial Production Sample (IPS)**

**Coarseness Factor:** 63 **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"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

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	%	