

# Aggregate Optimization Chart

## Production Gradation Report

PLANT #: **P-101**

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

Sample Date: **3/20/23**

Concrete Grade: **DM, 4500HP**

Dates Test Represents: **3/21/2023** through **3/27/2023**

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

Aggr. Class	Pit #	Source	Weight (ssd)	ft <sup>3</sup>	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1400	8.56	2.62	48.3
26A	71-47	Presque Isle	350	2.14	2.62	12.1
2NS	63-115	Ray Rd	1150	6.95	2.65	39.7
Total Wt			2900	17.66		100.0



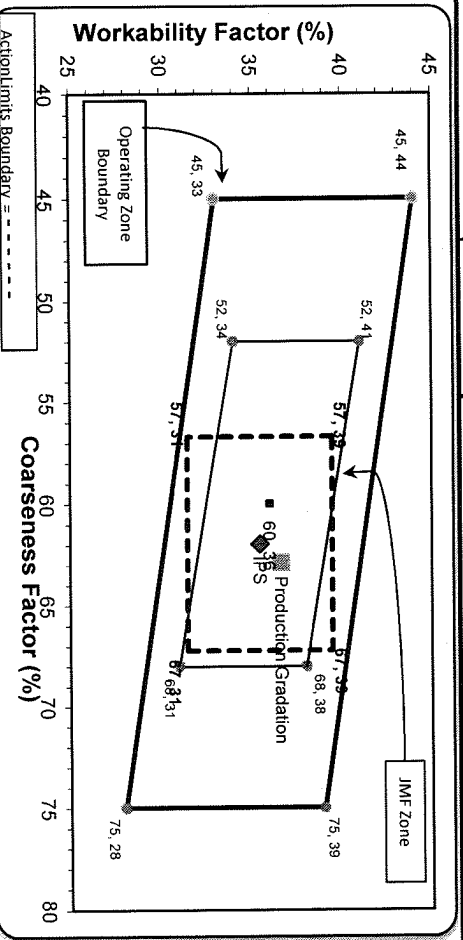
Superior Materials, LLC  
30701 W. 10 Mile Rd.  
Suite 500  
Farmington Hills, MI 48336

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"	96.3	100.0	100.0	98.2	1.8	1.8
3/4"	81.4	100.0	100.0	91.0	9.0	9.0
1/2"	35.4	97.2	100.0	68.5	22.5	31.5
3/8"	17.4	87.2	100.0	58.6	9.9	41.4
#4	2.5	22.3	96.7	42.2	16.3	57.8
#8	1.7	6.2	82.1	34.1	8.1	65.9
#16	1.5	3.8	68.0	28.1	6.0	71.9
#30	1.4	3.3	52.6	21.9	6.2	78.1
#50	1.4	3.0	26.4	11.5	10.4	88.5
#100	1.3	2.8	5.8	3.3	8.2	96.7
LBW	1.1	2.5	1.2	1.3	2.0	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 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	Initial Production Sample (IPS)
Coarseness Factor: <b>63</b>	<input checked="" type="radio"/> Batch Plant Gradations	<input type="radio"/> Aggregate Supplier Gradations	<b>34</b>	<b>36.6</b>

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	95.0	5.0	5.0
1/2"	70.5	24.5	29.5
3/8"	60.0	10.5	40.0
#4	44.4	15.6	55.6
#8	35.5	9.0	64.5
#16	28.5	7.0	71.5
#30	21.5	7.0	78.5
#50	10.2	11.3	89.8
#100	3.1	7.1	96.9
LBW	1.3	1.8	98.7



PREPARED BY:  
SM, LLC Technical Service

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



**Plant** S101-Superior Mount Clemens

**Product** 1051-6AA LS

**Name/Title** Doug Storey / QC Technician

**Period:** 03/12/2023 - 03/18/2023

**Report Date** 03/17/2023

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	96.3	%	95-100
	3/4" (19mm)	81.4	%	
	1/2" (12.5mm)	35.4	%	30-60
	3/8" (9.5mm)	17.4	%	
	#4 (4.75mm)	2.5	%	0-8
	#8 (2.36mm)	1.7	%	
	#16 (1.18mm)	1.5	%	
	#30 (.6mm)	1.4	%	
	#50 (.3mm)	1.4	%	
	#100 (.15mm)	1.3	%	
	#200 (75µm)	1.22	%	
	Wash Loss (#200/75µm)	1.1	%	0-2
	Total Moisture	3.12	%	



Plant S101-Superior Mount Clemens  
 Product 1067-26A Mod LS  
 Period: 03/12/2023 - 03/18/2023

Name/Title Doug Storey / QC Technician  
 Report Date 03/17/2023

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)	97.2	%	95-100
	3/8" (9.5mm)	87.2	%	60-95
	#4 (4.75mm)	22.3	%	5-30
	#8 (2.36mm)	6.2	%	0-12
	#16 (1.18mm)	3.8	%	
	#30 (.6mm)	3.3	%	
	#50 (.3mm)	3.0	%	
	#100 (.15mm)	2.8	%	
	#200 (75µm)	2.5	%	
	Wash Loss (#200/75um)	2.5	%	0-3
	Total Moisture	3.28	%	



Plant S101-Superior Mount Clemens

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 03/19/2023 - 03/25/2023

Report Date 03/22/2023

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.7	%	95-100
	#8 (2.36mm)	82.1	%	65-95
	#16 (1.18mm)	68.0	%	35-75
	#30 (.6mm)	52.6	%	20-55
	#50 (.3mm)	26.4	%	10-30
	#100 (.15mm)	5.8	%	0-10
	#200 (75µm)	1.3	%	
	FM	2.68		2.6-3
	Wash Loss (#200/75um)	1.2	%	0-3
	Total Moisture	2.37	%	