

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **20**

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

Sample Date: **7/24/23**

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: **7/25/2023** through **7/31/2023**

MIDOT No.: \_\_\_\_\_

Aggr. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1550	9.48	2.62	50.8
26A	71-47	Presque Isle	250	1.53	2.62	8.2
2NS	63-92	Grange Hall	1250	7.56	2.65	41.0
<b>Total Wt</b>			<b>3050</b>	<b>18.57</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"	96.8	100.0	100.0	98.4	1.6	1.6
3/4"	77.0	100.0	100.0	88.3	10.1	11.7
1/2"	26.0	100.0	100.0	61.9	26.4	38.1
3/8"	10.0	80.1	100.0	52.6	9.3	47.4
#4	2.1	18.8	97.7	42.6	10.0	57.4
#8	1.8	6.7	85.1	36.3	6.3	63.7
#16	1.8	4.0	70.2	30.0	6.3	70.0
#30	1.8	3.2	51.9	22.4	7.6	77.6
#50	1.7	2.7	23.1	10.6	11.9	89.4
#100	1.6	2.4	3.6	2.5	8.1	97.5
LBW	1.2	2.1	0.8	1.1	1.4	98.9



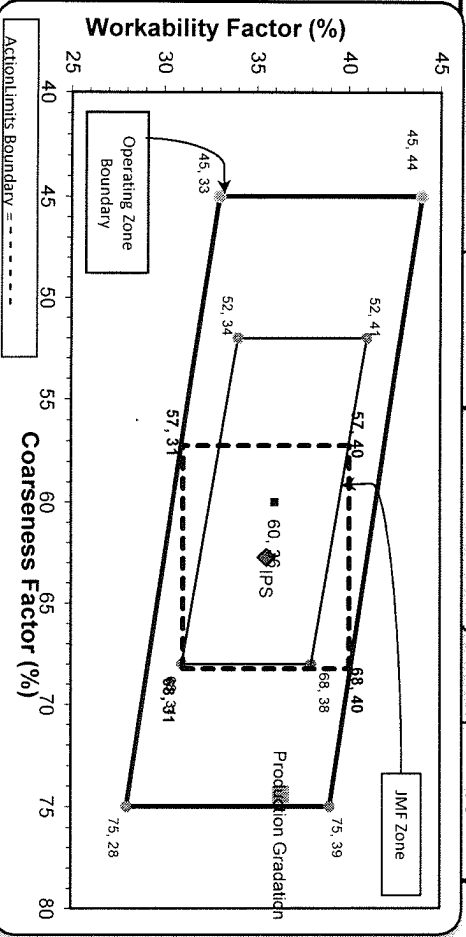
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
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 Farmington Hills, MI 48336

\*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

Coarseness Factor: **74** Workability Factor: **36**

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"	100.0	0.0	0.0
3/4"	93.3	6.7	6.7
1/2"	70.6	22.6	29.4
3/8"	59.6	11.0	40.4
#4	43.9	15.7	56.1
#8	35.6	8.4	64.4
#16	28.4	7.2	71.6
#30	19.4	9.0	80.6
#50	7.5	11.9	92.5
#100	0.9	6.6	99.1
LBW	0.9	0.1	99.1

PREPARED BY:  
 SM, LLC Technical Service

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



**Plant** S20-Superior Flint

**Product** 1051-6AA LS

**Period:** 07/23/2023 - 07/29/2023

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

**Report Date** 07/30/2023

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	96.8	%	95-100
	3/4" (19mm)	77.0	%	
	1/2" (12.5mm)	26.0	%	30-60
	3/8" (9.5mm)	10.0	%	
	#4 (4.75mm)	2.1	%	0-8
	#8 (2.36mm)	1.8	%	
	#16 (1.18mm)	1.8	%	
	#30 (.6mm)	1.8	%	
	#50 (.3mm)	1.7	%	
	#100 (.15mm)	1.6	%	
	#200 (75µm)	1.32	%	
	Wash Loss (#200/75um)	1.2	%	0-2
	Total Moisture	1.57	%	



Plant S20-Superior Flint  
 Product 1067-26A Mod LS  
 Period: 07/23/2023 - 07/29/2023

Name/Title Doug Storey / QC Technician  
 Report Date 07/30/2023

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)	93.9	%	95-100
	3/8" (9.5mm)	80.1	%	60-95
	#4 (4.75mm)	18.8	%	5-30
	#8 (2.36mm)	6.7	%	0-12
	#16 (1.18mm)	4.0	%	
	#30 (.6mm)	3.2	%	
	#50 (.3mm)	2.7	%	
	#100 (.15mm)	2.4	%	
	#200 (75µm)	2.1	%	
	Wash Loss (#200/75um)	2.1	%	0-3
	Total Moisture	0.95	%	



Plant S20-Superior Flint

Product 1022-2NS GR

Period: 07/23/2023 - 07/29/2023

Name/Title Doug Storey / QC Technician

Report Date 07/30/2023

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.7	%	95-100
	#8 (2.36mm)	85.1	%	65-95
	#16 (1.18mm)	70.2	%	35-75
	#30 (.6mm)	51.9	%	20-55
	#50 (.3mm)	23.1	%	10-30
	#100 (.15mm)	3.6	%	0-10
	#200 (75µm)	0.8	%	
	FM	2.68		2.6-3
	Wash Loss (#200/75um)	0.8	%	0-3
	Total Moisture	3.24	%	