

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-32**

Sample Date: **7/14/22**

Dates Test Represents: **7/5/2022** through **7/11/2022**

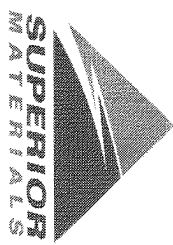
Concrete Grade: **S2M, 3500HP**

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

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

Agg. Class	Pit #	Source	Weight (ssd)	ft <sup>3</sup>	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1670	10.21	2.62	54.8
26A	71-47	Presque Isle	150	0.92	2.62	4.9
2NS	95-013	Smeller Bay	1230	7.44	2.65	40.3
<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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	85.1	100.0	100.0	91.8	8.2	8.2
1/2"	54.6	95.6	100.0	74.9	16.9	25.1
3/8"	32.1	81.5	100.0	61.9	13.0	38.1
#4	5.0	22.4	96.2	42.6	19.3	57.4
#8	2.3	6.5	82.1	34.7	7.9	65.3
#16	2.0	3.6	66.9	28.3	6.4	71.7
#30	1.9	2.8	48.2	20.9	7.6	79.4
#50	1.8	2.5	24.4	10.6	9.7	89.1
#100	1.7	2.3	7.7	4.1	6.8	95.9
LBW	1.3	1.9	1.5	1.4	2.7	98.6

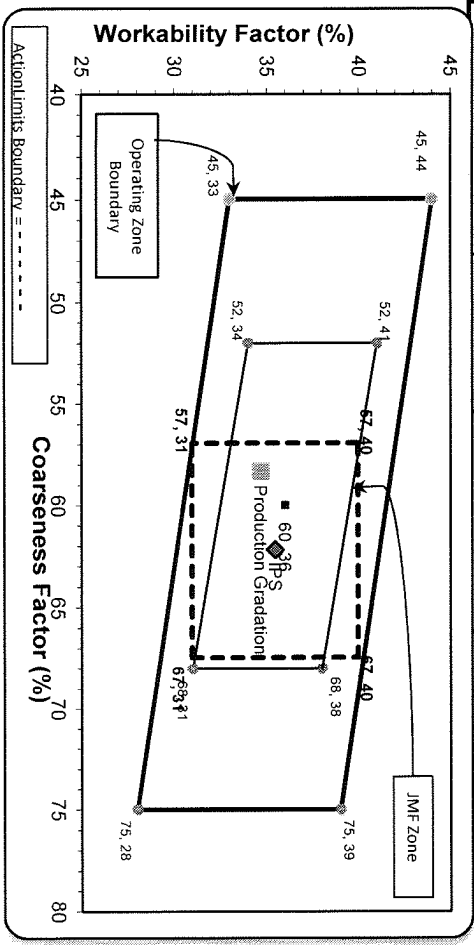


**Superior Materials, LLC**  
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\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max.  
 nom. max. #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max.  
 nom. max. #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when  
 a 2" max. size (nom. 1.5") aggregate is used.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Coarseness Factor: **58** Workability Factor: **35**



Initial Production Sample (IPS)

Coarseness Factor: **62** Workability Factor: **35**

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"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY:  
 SM, LLC Technical Service

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

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 07/03/2022 - 07/09/2022

Report Date 07/08/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.2	%	95-100
	#8 (2.36mm)	82.1	%	65-95
	#16 (1.18mm)	66.9	%	35-75
	#30 (.6mm)	48.2	%	20-55
	#50 (.3mm)	24.4	%	10-30
	#100 (.15mm)	7.7	%	0-10
	#200 (75µm)	2.0	%	
	FM	2.75		2.6-3
	Wash Loss (#200/75um)	1.5	%	0-3
	Total Moisture	5.0	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 07/03/2022 - 07/09/2022

Report Date 07/08/2022

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)	95.6	%	95-100
	3/8" (9.5mm)	81.5	%	60-95
	#4 (4.75mm)	22.4	%	5-30
	#8 (2.36mm)	6.5	%	0-12
	#16 (1.18mm)	3.6	%	
	#30 (.6mm)	2.8	%	
	#50 (.3mm)	2.5	%	
	#100 (.15mm)	2.3	%	
	#200 (75µm)	2.0	%	
	Wash Loss (#200/75um)	1.9	%	0-3
	Total Moisture	3.6	%	

# Edw. C. Levy Co.

JMT  
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Detroit, 48209  
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Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 07/03/2022 - 07/09/2022

Report Date 07/08/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	100.0	%	95-100
	3/4" (19mm)	85.1	%	
	1/2" (12.5mm)	54.6	%	30-60
	3/8" (9.5mm)	32.1	%	
	#4 (4.75mm)	5.0	%	0-8
	#8 (2.36mm)	2.3	%	
	#16 (1.18mm)	2.0	%	
	#30 (.6mm)	1.9	%	
	#50 (.3mm)	1.8	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.4	%	
	Wash Loss (#200/75um)	1.3	%	0-2
	Total Moisture	3.2	%	