

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-32**

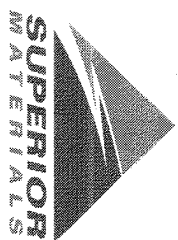
Sample Date: **6/7/21**

Dates Test Represents: **6/8/2021** through **6/14/2021**

Concrete Grade: **S2M**

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

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



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

Aggr. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1400	8.56	2.62	45.9
26A	71-47	Presque Isle	420	2.57	2.62	13.8
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
<b>Total Wt</b>			<b>3050</b>	<b>18.57</b>		<b>100.0</b>

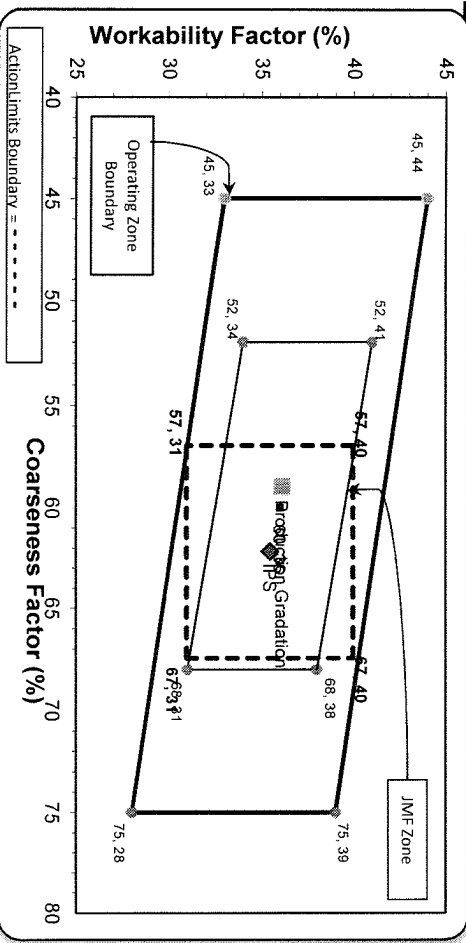
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.7	100.0	100.0	99.9	0.1	0.1
3/4"	86.4	100.0	100.0	93.8	6.1	6.2
1/2"	47.8	96.0	100.0	75.5	18.3	24.5
3/8"	24.1	79.5	100.0	62.3	13.2	37.7
#4	3.8	29.6	96.4	44.7	17.6	55.3
#8	2.7	8.4	83.6	36.1	8.6	63.9
#16	2.2	3.4	66.5	28.3	7.8	71.7
#30	2.1	2.7	45.8	19.8	8.5	80.2
#50	1.9	2.3	23.7	10.7	9.1	89.3
#100	1.8	2.2	8.1	4.4	6.4	95.6
LBW	1.4	1.6	1.1	1.3	3.1	98.7

Verify this number is 100%

\*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: **59** Workability Factor: **36**



Initial Production Sample (IPS)

Sieve	Coarseness Factor:	Workability Factor:	Cumulative % Passing	% Retained	Cumulative % Retained
2"	62	35	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  
 Period: 06/06/2021 - 06/12/2021

Name/Title Doug Storey / QC Technician  
 Report Date 06/12/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.4	%	95-100
	#8 (2.36mm)	83.6	%	65-95
	#16 (1.18mm)	66.5	%	35-75
	#30 (.6mm)	45.8	%	20-55
	#50 (.3mm)	23.7	%	10-30
	#100 (.15mm)	8.1	%	0-10
	#200 (75µm)	1.2	%	
	FM	2.76		2.6-3
	Wash Loss (#200/75um)	1.1	%	0-3
	Total Moisture	4.9	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 06/06/2021 - 06/12/2021

Report Date 06/12/2021

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)	79.5	%	60-95
	#4 (4.75mm)	29.6	%	5-30
	#8 (2.36mm)	8.4	%	0-12
	#16 (1.18mm)	3.4	%	
	#30 (.6mm)	2.7	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	3.8	%	

# Edw. C. Levy Co.

JMT  
8911 W. Jefferson  
Detroit, 48209  
(313) 429-2429

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 06/06/2021 - 06/12/2021

Report Date 06/12/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	1" (25mm)	99.7	%	95-100
	3/4" (19mm)	86.4	%	
	1/2" (12.5mm)	47.8	%	30-60
	3/8" (9.5mm)	24.1	%	
	#4 (4.75mm)	3.8	%	0-8
	#8 (2.36mm)	2.7	%	
	#16 (1.18mm)	2.2	%	
	#30 (.6mm)	2.1	%	
	#50 (.3mm)	1.9	%	
	#100 (.15mm)	1.8	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75µm)	1.4	%	0-2
	Total Moisture	1.5	%	