

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: **6/27/22**

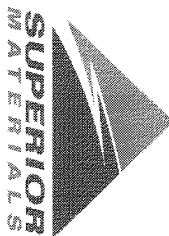
Dates Test Represents: **6/28/2022**

through **7/4/2022**

Concrete Grade: **S2M, 3500HP**

Contractor: _____

MDOT No.: _____



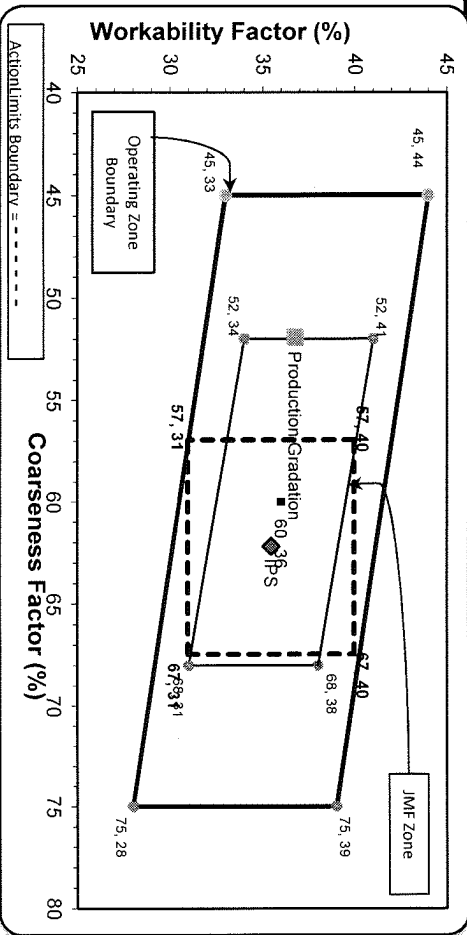
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	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
Total Wt:						3050
						18.57
						100.0

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"	98.5	100.0	100.0	99.3	0.7	0.7
3/4"	91.0	100.0	100.0	95.9	3.4	4.1
1/2"	56.1	96.5	100.0	79.2	16.6	20.8
3/8"	32.5	86.5	100.0	67.2	12.1	32.8
#4	6.4	31.3	96.2	46.0	21.1	54.0
#8	3.0	10.6	84.1	36.8	9.3	63.2
#16	2.6	5.0	69.6	30.0	6.8	70.0
#30	2.4	3.8	51.2	22.3	7.7	77.7
#50	2.3	3.3	26.6	12.2	10.0	87.8
#100	2.2	3.0	8.7	4.9	7.3	95.1
LBW	1.9	2.6	1.6	1.9	3.1	98.1

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **52** Workability Factor: **37**



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

*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.

PREPARED BY:
SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 06/26/2022 - 07/02/2022

Report Date 07/01/2022

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)	84.1	%	65-95
	#16 (1.18mm)	69.6	%	35-75
	#30 (.6mm)	51.2	%	20-55
	#50 (.3mm)	26.6	%	10-30
	#100 (.15mm)	8.7	%	0-10
	#200 (75µm)	2.1	%	
	FM	2.64		2.6-3
	Wash Loss (#200/75um)	1.6	%	0-3

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 06/26/2022 - 07/02/2022

Report Date 07/01/2022

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)	95.5	%	95-100
	3/8" (9.5mm)	86.5	%	60-95
	#4 (4.75mm)	31.3	%	5-30
	#8 (2.36mm)	10.6	%	0-12
	#16 (1.18mm)	5.0	%	
	#30 (.6mm)	3.8	%	
	#50 (.3mm)	3.3	%	
	#100 (.15mm)	3.0	%	
	#200 (75µm)	2.7	%	
	Wash Loss (#200/75um)	2.6	%	0-3

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: 06/26/2022 - 07/02/2022

Report Date 07/01/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	98.5	%	95-100
	3/4" (19mm)	91.0	%	
	1/2" (12.5mm)	56.1	%	30-60
	3/8" (9.5mm)	32.5	%	
	#4 (4.75mm)	6.4	%	0-8
	#8 (2.36mm)	3.0	%	
	#16 (1.18mm)	2.6	%	
	#30 (.6mm)	2.4	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	2.0	%	
	Wash Loss (#200/75um)	1.9	%	0-2