

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Sample Date: 3/21/22

Dates Test Represents: 3/22/2022 through 3/28/2022

Concrete Grade: S2M, 3500HP

Contractor: _____

MDOT No.: _____



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

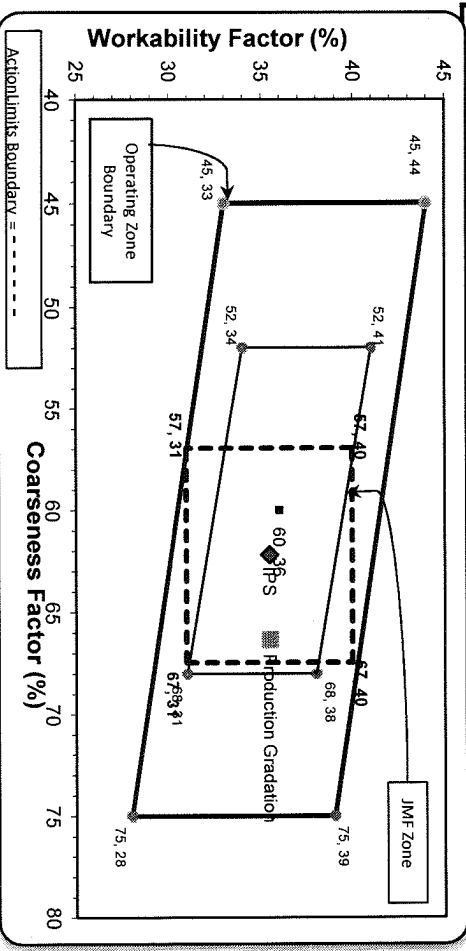
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1570	9.60	2.62	51.5
26A	71-47	Presque Isle	250	1.53	2.62	8.2
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
Total Wt:			3050	18.57		100.0

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"	97.9	100.0	100.0	98.9	1.1	1.1
3/4"	80.8	100.0	100.0	90.1	8.8	9.9
1/2"	39.8	95.3	100.0	68.6	21.5	31.4
3/8"	18.9	87.1	100.0	57.2	11.4	42.8
#4	3.7	28.5	95.9	42.9	14.3	57.1
#8	2.5	9.9	82.8	35.5	7.4	64.5
#16	2.2	4.6	68.1	29.0	6.5	71.0
#30	2.0	3.2	49.7	21.3	7.6	78.7
#50	2.0	2.6	24.9	11.3	10.1	88.7
#100	1.9	2.4	7.6	4.2	7.0	95.8
LBW	1.4	2.0	1.8	1.6	2.6	98.4

*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: 66 Workability Factor: 35



Initial Production Sample (IPS)

Sieve	% 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
 Period: 03/20/2022 - 03/26/2022

Name/Title Doug Storey / QC Technician
 Report Date 03/25/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.9	%	95-100
	#8 (2.36mm)	82.8	%	65-95
	#16 (1.18mm)	68.1	%	35-75
	#30 (.6mm)	49.7	%	20-55
	#50 (.3mm)	24.9	%	10-30
	#100 (.15mm)	7.6	%	0-10
	#200 (75µm)	2.1	%	
	FM	2.71		2.6-3
	Wash Loss (#200/75µm)	1.8	%	0-3
	Total Moisture	4.5	%	

Plant 958-JMT
 Product 1067-26A Mod LS
 Period: 03/20/2022 - 03/26/2022

Name/Title Doug Storey / QC Technician
 Report Date 03/25/2022

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)	95.3	%	95-100
	3/8" (9.5mm)	87.1	%	60-95
	#4 (4.75mm)	28.5	%	5-30
	#8 (2.36mm)	9.9	%	0-12
	#16 (1.18mm)	4.6	%	
	#30 (.6mm)	3.2	%	
	#50 (.3mm)	2.6	%	
	#100 (.15mm)	2.4	%	
	#200 (75µm)	2.1	%	
	Wash Loss (#200/75um)	2.0	%	0-3
	Total Moisture	3.6	%	

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: 03/20/2022 - 03/26/2022

Report Date 03/25/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.9	%	95-100
	3/4" (19mm)	80.8	%	
	1/2" (12.5mm)	39.8	%	30-60
	3/8" (9.5mm)	18.9	%	
	#4 (4.75mm)	3.7	%	0-8
	#8 (2.36mm)	2.5	%	
	#16 (1.18mm)	2.2	%	
	#30 (.6mm)	2.0	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75um)	1.4	%	0-2
	Total Moisture	2.6	%	