

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: **3/13/23**

Dates Test Represents: **3/14/2023** through **3/20/2023**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____



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

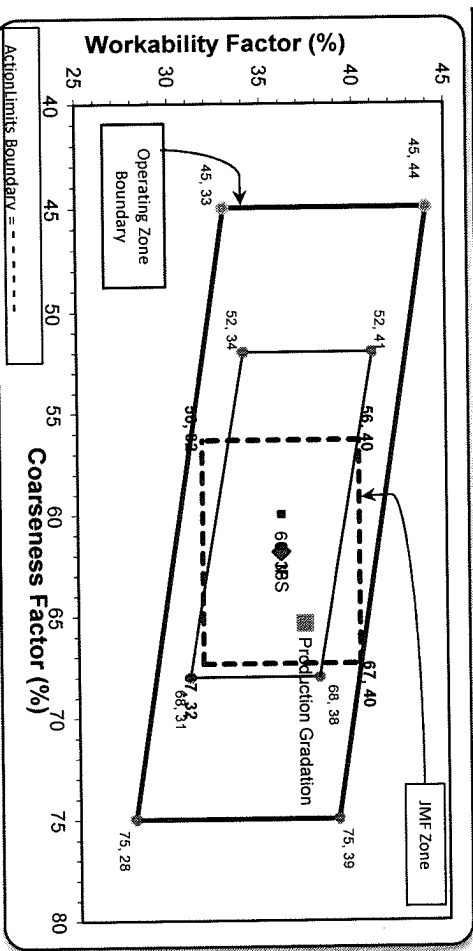
Aggr. Class	Pit #	Source	Weight (ssn)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1405	8.59	2.62	48.4
26A	71-47	Presque Isle	350	2.14	2.62	12.0
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

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"	95.3	100.0	100.0	97.7	2.3	2.3
3/4"	76.3	100.0	100.0	88.5	9.2	11.5
1/2"	33.4	96.4	100.0	67.4	21.2	32.6
3/8"	16.1	82.6	100.0	57.3	10.0	42.7
#4	3.5	18.4	96.1	42.0	15.4	58.0
#8	2.3	4.7	83.5	34.7	7.2	65.3
#16	1.8	3.0	67.7	28.0	6.7	72.0
#30	1.7	2.6	48.6	20.4	7.7	79.6
#50	1.6	2.3	23.9	10.5	9.9	89.5
#100	1.5	2.1	7.0	3.7	6.8	96.3
LBW	1.2	1.7	1.7	1.5	2.3	98.5

*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	Adjusted WF
Coarseness Factor: 65	<input checked="" type="radio"/> Batch Plant Gradations	<input type="radio"/> Aggregate Supplier Gradations	37.2
Workability Factor: 35			

Initial Production Sample (IPS)	Coarseness Factor:	Workability Factor:
	62	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"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

PREPARED BY:
SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 03/12/2023 - 03/18/2023

Report Date 03/17/2023

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.1	%	95-100
	#8 (2.36mm)	83.5	%	65-95
	#16 (1.18mm)	67.7	%	35-75
	#30 (.6mm)	48.6	%	20-55
	#50 (.3mm)	23.9	%	10-30
	#100 (.15mm)	7.0	%	0-10
	#200 (75µm)	1.9	%	
	FM	2.73		2.6-3
	Wash Loss (#200/75um)	1.7	%	0-3
	Total Moisture	5.1	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 03/12/2023 - 03/18/2023

Report Date 03/17/2023

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)	96.4	%	95-100
	3/8" (9.5mm)	82.6	%	60-95
	#4 (4.75mm)	18.4	%	5-30
	#8 (2.36mm)	4.7	%	0-12
	#16 (1.18mm)	3.0	%	
	#30 (.6mm)	2.6	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.8	%	
	Wash Loss (#200/75µm)	1.7	%	0-3
	Total Moisture	2.1	%	

Edw. C. Levy Co.

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

Plant 958-JMT

Product 1054-6AA LS PI

Period: 03/12/2023 - 03/18/2023

Name/Title Doug Storey / QC Technician

Report Date 03/17/2023

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	95.3	%	95-100
	3/4" (19mm)	76.3	%	
	1/2" (12.5mm)	33.4	%	30-60
	3/8" (9.5mm)	16.1	%	
	#4 (4.75mm)	3.5	%	0-8
	#8 (2.36mm)	2.3	%	
	#16 (1.18mm)	1.8	%	
	#30 (.6mm)	1.7	%	
	#50 (.3mm)	1.6	%	
	#100 (.15mm)	1.5	%	
	#200 (75µm)	1.3	%	
	Wash Loss (#200/75um)	1.2	%	0-2
	Total Moisture	2.4	%	