

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

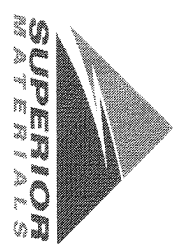
Sample Date: **9/5/22**

Dates Test Represents: **9/6/2022** through **9/12/2022**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____



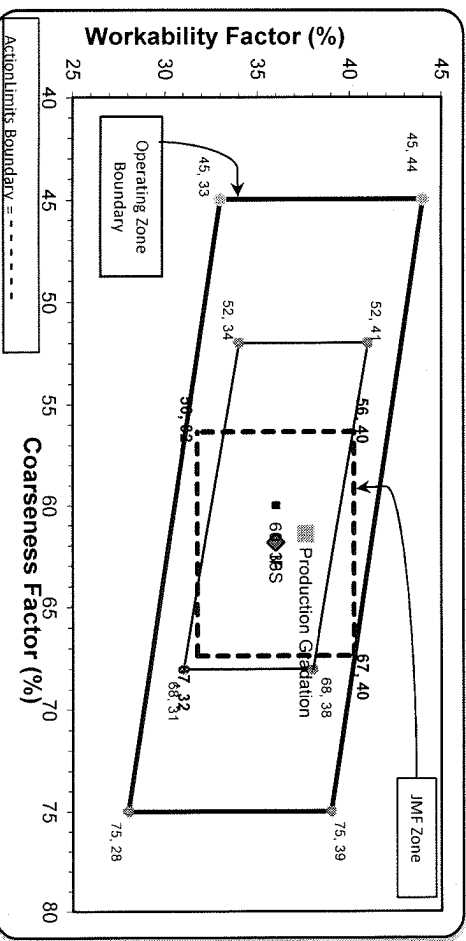
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1355	8.29	2.62	46.6
26A	71-47	Presque Isle	400	2.45	2.62	13.8
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
Total Wt.			2905			100.0

Sieve	% Retained	Cumulative % Retained
2"	0.0	0.0
1.5"	0.0	0.0
1"	2.1	2.1
3/4"	4.2	6.3
1/2"	23.8	30.1
3/8"	9.8	39.9
#4	17.5	57.4
#8	7.5	64.9
#16	6.7	71.6
#30	7.5	79.1
#50	10.2	89.3
#100	6.8	96.1
LBW	2.4	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	<input checked="" type="radio"/> Batch Plant Gradations	<input type="radio"/> Aggregate Supplier Gradations
Coarseness Factor:	61	Workability Factor: 35
Adjusted WF: 37.6		



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: 09/04/2022 - 09/10/2022

Report Date 09/09/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.8	%	95-100
	#8 (2.36mm)	83.4	%	65-95
	#16 (1.18mm)	67.9	%	35-75
	#30 (.6mm)	49.3	%	20-55
	#50 (.3mm)	23.8	%	10-30
	#100 (.15mm)	6.9	%	0-10
	#200 (75µm)	1.9	%	
	FM	2.73		2.6-3
	Wash Loss (#200/75um)	1.5	%	0-3
	Total Moisture	3.9	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 09/04/2022 - 09/10/2022

Report Date 09/09/2022

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)	93.7	%	95-100
	3/8" (9.5mm)	84.2	%	60-95
	#4 (4.75mm)	20.8	%	5-30
	#8 (2.36mm)	5.7	%	0-12
	#16 (1.18mm)	3.0	%	
	#30 (.6mm)	2.4	%	
	#50 (.3mm)	2.2	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.8	%	
	Wash Loss (#200/75µm)	1.8	%	0-3
	Total Moisture	2.8	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 09/04/2022 - 09/10/2022

Report Date 09/09/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	95.6	%	95-100
	3/4" (19mm)	86.5	%	
	1/2" (12.5mm)	37.3	%	30-60
	3/8" (9.5mm)	19.2	%	
	#4 (4.75mm)	3.9	%	0-8
	#8 (2.36mm)	2.8	%	
	#16 (1.18mm)	2.4	%	
	#30 (.6mm)	2.3	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.5	%	0-2
	Total Moisture	2.7	%	