

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

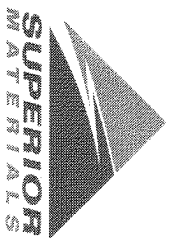
Sample Date: **5/30/22**

Dates Test Represents: **5/31/2022** through **6/6/2022**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____



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

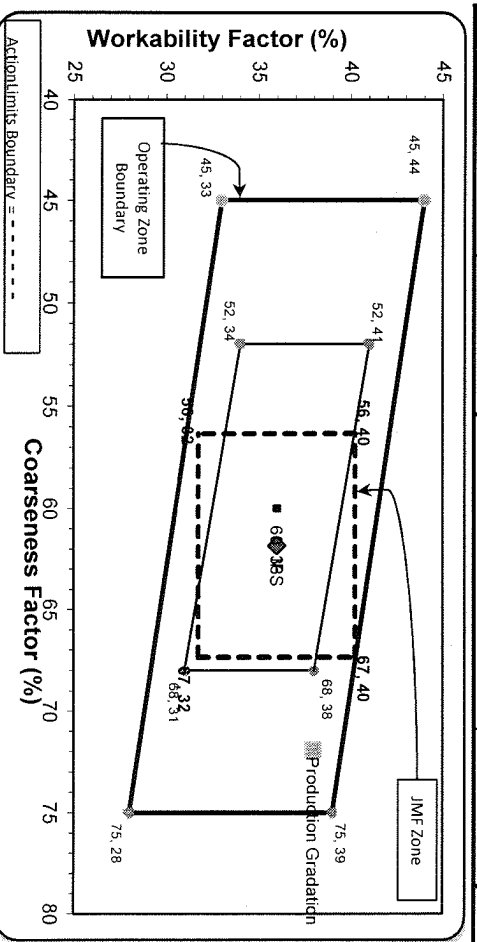
Aggr. Class	Pit #	Source	Weight (ss)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1505	9.21	2.62	51.8
26A	71-47	Presque Isle	250	1.53	2.62	8.6
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
		Total Wt	2905	17.69		100.0

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"	99.3	100.0	100.0	99.6	0.4	0.4
3/4"	74.2	100.0	100.0	86.6	13.0	13.4
1/2"	31.9	95.2	100.0	64.3	22.3	35.7
3/8"	13.5	81.6	100.0	53.6	10.7	46.4
#4	2.5	27.0	96.5	41.8	11.8	58.2
#8	2.2	10.1	84.5	35.5	6.4	64.5
#16	2.0	5.6	69.9	29.2	6.3	70.8
#30	1.9	4.2	50.6	21.4	7.8	78.6
#50	1.7	3.7	24.8	11.0	10.4	89.0
#100	1.6	3.4	6.9	3.9	7.2	96.1
LBW	1.2	2.9	1.6	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

Coarseness Factor: **72** Workability Factor: **35** Adjusted WF: **38.0**



Sieve	Coarseness Factor:	Workability Factor:	Adjusted WF:
2"	62	36	38.0
1.5"			
1"			
3/4"			
1/2"			
3/8"			
#4			
#8			
#16			
#30			
#50			
#100			
LBW			

PREPARED BY:
SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.5	%	95-100
	#8 (2.36mm)	84.5	%	65-95
	#16 (1.18mm)	69.9	%	35-75
	#30 (.6mm)	50.6	%	20-55
	#50 (.3mm)	24.8	%	10-30
	#100 (.15mm)	6.9	%	0-10
	#200 (75µm)	1.9	%	
	FM	2.67		2.6-3
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	5.2	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

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)	95.2	%	95-100
	3/8" (9.5mm)	81.6	%	60-95
	#4 (4.75mm)	27.0	%	5-30
	#8 (2.36mm)	10.1	%	0-12
	#16 (1.18mm)	5.6	%	
	#30 (.6mm)	4.2	%	
	#50 (.3mm)	3.7	%	
	#100 (.15mm)	3.4	%	
	#200 (75µm)	3.1	%	
	Wash Loss (#200/75um)	2.9	%	0-3
	Total Moisture	3.2	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	99.3	%	95-100
	3/4" (19mm)	74.2	%	
	1/2" (12.5mm)	31.9	%	30-60
	3/8" (9.5mm)	13.5	%	
	#4 (4.75mm)	2.5	%	0-8
	#8 (2.36mm)	2.2	%	
	#16 (1.18mm)	2.0	%	
	#30 (.6mm)	1.9	%	
	#50 (.3mm)	1.7	%	
	#100 (.15mm)	1.6	%	
	#200 (75µm)	1.4	%	
	Wash Loss (#200/75um)	1.2	%	0-2
	Total Moisture	2.6	%	