

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

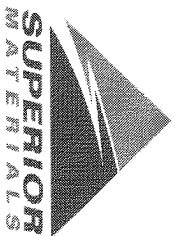
Sample Date: **5/2/22**

Dates Test Represents: **5/3/2022** through **5/9/2022**

Concrete Grade: **S2M, 3500HP**

Contractor: _____

MDOT No.: _____



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

Aggr. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1520	9.30	2.62	49.8
26A	71-47	Presque Isle	300	1.83	2.62	9.8
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
		Total Wt	3050	18.57		100.0

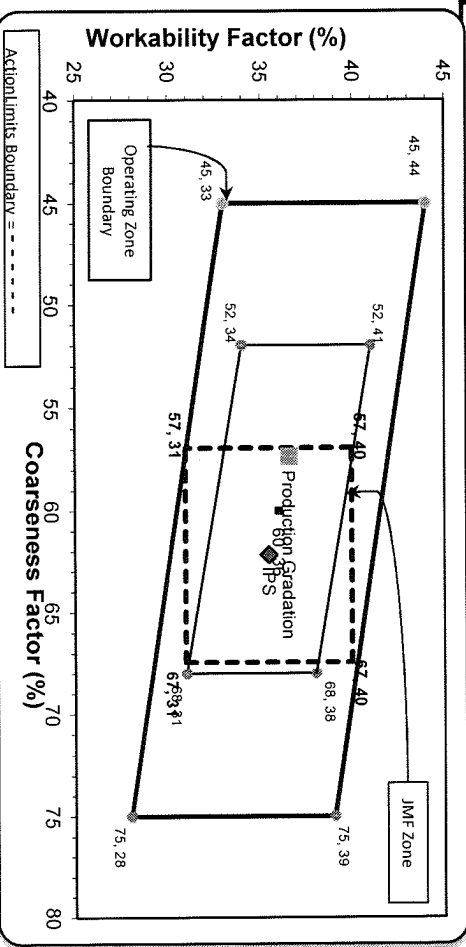
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	88.9	100.0	100.0	94.5	5.2	5.5
1/2"	52.3	100.0	100.0	76.2	18.2	23.8
3/8"	30.6	81.7	100.0	63.6	12.6	36.4
#4	5.0	26.1	97.2	44.3	19.4	55.7
#8	2.6	9.1	85.2	36.6	7.7	63.4
#16	2.2	4.8	70.8	30.1	6.4	69.9
#30	2.1	3.7	51.8	22.3	7.8	77.7
#50	2.0	3.4	25.3	11.5	10.8	88.5
#100	2.0	3.1	7.4	4.3	7.2	95.7
LBW	1.7	2.7	1.7	1.8	2.5	98.2

Verify this number is 100%

*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

Initial Production Sample (IPS)



Sieve	Coarseness Factor:	Workability Factor:	Cumulative % Passing	% Retained	Cumulative % Retained
2"	62	35	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: 05/01/2022 - 05/07/2022

Name/Title Doug Storey / QC Technician
 Report Date 05/06/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.2	%	95-100
	#8 (2.36mm)	85.2	%	65-95
	#16 (1.18mm)	70.8	%	35-75
	#30 (.6mm)	51.8	%	20-55
	#50 (.3mm)	25.3	%	10-30
	#100 (.15mm)	7.4	%	0-10
	#200 (75µm)	1.9	%	
	FM	2.62		2.6-3
	Wash Loss (#200/75um)	1.7	%	0-3

Plant 958-JMT
 Product 1067-26A Mod LS
 Period: 05/01/2022 - 05/07/2022

Name/Title Doug Storey / QC Technician
 Report Date 05/06/2022

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)	100.0	%	95-100
	3/8" (9.5mm)	81.7	%	60-95
	#4 (4.75mm)	26.1	%	5-30
	#8 (2.36mm)	9.1	%	0-12
	#16 (1.18mm)	4.8	%	
	#30 (.6mm)	3.7	%	
	#50 (.3mm)	3.4	%	
	#100 (.15mm)	3.1	%	
	#200 (75µm)	2.8	%	
	Wash Loss (#200/75µm)	2.7	%	0-3
	Total Moisture	4.3	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 05/01/2022 - 05/07/2022

Report Date 05/06/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	99.4	%	95-100
	3/4" (19mm)	88.9	%	
	1/2" (12.5mm)	52.3	%	30-60
	3/8" (9.5mm)	30.6	%	
	#4 (4.75mm)	5.0	%	0-8
	#8 (2.36mm)	2.6	%	
	#16 (1.18mm)	2.2	%	
	#30 (.6mm)	2.1	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.8	%	
	Wash Loss (#200/75um)	1.7	%	0-2