

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: **5/31/21**

Dates Test Represents: **6/1/2021** through **6/7/2021**

Concrete Grade: **S2M**

Contractor: _____

MIDOT 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	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	320	1.96	2.62	10.5
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
			Total Wt.	3050	18.57	100.0

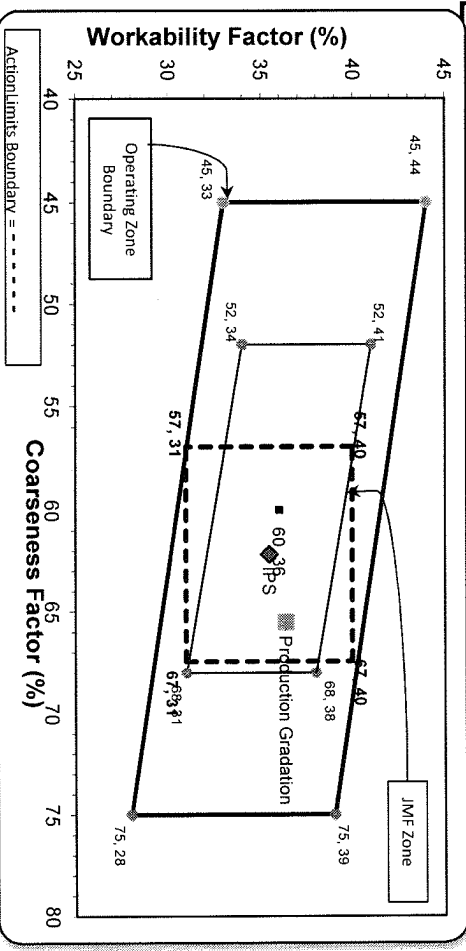
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	97.2	100.0	100.0	98.6	1.4	1.4
3/4"	73.3	100.0	100.0	86.9	11.8	13.1
1/2"	34.0	96.7	100.0	67.2	19.7	32.8
3/8"	17.9	87.3	100.0	58.3	8.9	41.7
#4	2.6	26.1	96.8	43.1	15.2	56.9
#8	2.4	10.0	84.6	36.3	6.7	63.7
#16	2.2	5.1	68.4	29.2	7.1	70.8
#30	2.0	3.6	45.5	19.7	9.5	80.3
#50	1.9	3.0	20.3	9.4	10.3	90.6
#100	1.8	2.5	5.9	3.5	5.9	96.5
LBW	1.4	1.8	1.1	1.3	2.2	98.7

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

Coarseness Factor: **66** Workability Factor: **36**



Initial Production Sample (IPS)

Coarseness Factor:	62
Workability Factor:	35

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"	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

Name/Title Doug Storey / QC Technician

Period: 05/30/2021 - 06/05/2021

Report Date 06/04/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.8	%	95-100
	#8 (2.36mm)	84.6	%	65-95
	#16 (1.18mm)	68.4	%	35-75
	#30 (.6mm)	45.5	%	20-55
	#50 (.3mm)	20.3	%	10-30
	#100 (.15mm)	5.9	%	0-10
	#200 (75µm)	1.4	%	
	FM	2.78		2.6-3
	Wash Loss (#200/75um)	1.1	%	0-3
	Total Moisture	4.7	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 05/30/2021 - 06/05/2021

Report Date 06/04/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.2	%	95-100
	3/4" (19mm)	73.3	%	
	1/2" (12.5mm)	34.0	%	30-60
	3/8" (9.5mm)	17.9	%	
	#4 (4.75mm)	2.6	%	0-8
	#8 (2.36mm)	2.4	%	
	#16 (1.18mm)	2.2	%	
	#30 (.6mm)	2.0	%	
	#50 (.3mm)	1.9	%	
	#100 (.15mm)	1.8	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75µm)	1.4	%	0-2
	Total Moisture	2.6	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 05/30/2021 - 06/05/2021

Report Date 06/04/2021

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)	96.7	%	95-100
	3/8" (9.5mm)	87.3	%	60-95
	#4 (4.75mm)	26.1	%	5-30
	#8 (2.36mm)	10.0	%	0-12
	#16 (1.18mm)	5.1	%	
	#30 (.6mm)	3.6	%	
	#50 (.3mm)	3.0	%	
	#100 (.15mm)	2.5	%	
	#200 (75µm)	2.1	%	
	Wash Loss (#200/75um)	1.8	%	0-3
	Total Moisture	3.9	%	