

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Contractor: _____

Sample Date: **7/18/22**

MIDOT No.: _____

Dates Test Represents: **7/19/2022** through **7/25/2022**

Concrete Grade: **S2M, 3500HP**

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1820	11.13	2.62	59.7
26A	71-47	Presque Isle	0	0.00	2.62	0.0
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
Total Wt			3050	18.57		100.0

Verify this number is 100%

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"	97.4	100.0	100.0	98.4	1.6	1.6
3/4"	84.8	100.0	100.0	90.9	7.5	9.1
1/2"	45.5	94.6	100.0	67.5	23.5	32.5
3/8"	22.7	82.5	100.0	53.9	13.6	46.1
#4	3.9	28.7	96.0	41.0	12.8	59.0
#8	2.4	9.6	82.3	34.6	6.4	65.4
#16	2.0	4.3	66.8	28.1	6.5	71.9
#30	1.8	3.2	47.7	20.3	7.8	79.7
#50	1.7	2.9	23.3	10.4	9.9	89.6
#100	1.5	2.6	7.2	3.8	6.6	96.2
LBW	1.1	2.2	1.3	1.2	2.6	98.8

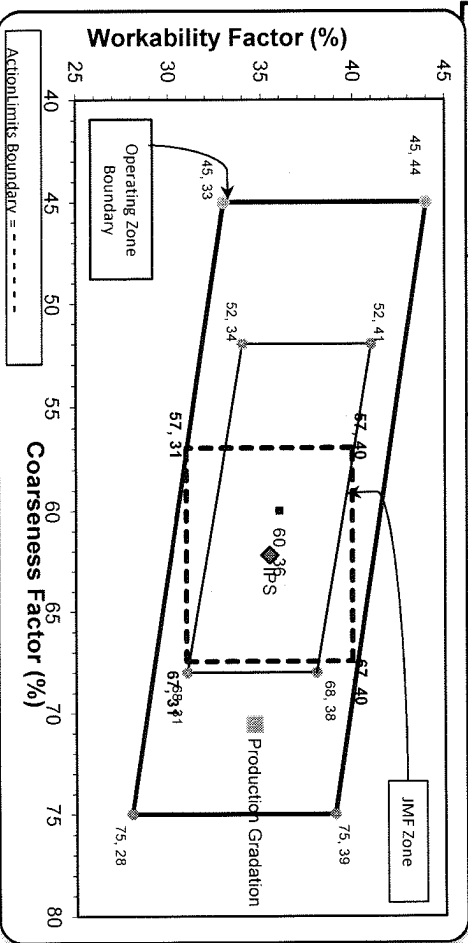
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max.
 nom. max., #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when
 a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Initial Production Sample (IPS)

Coarseness Factor: **71** Workability Factor: **35**

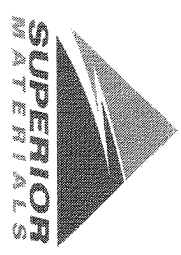
Coarseness Factor: **62** Workability Factor: **35**



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:



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

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 07/17/2022 - 07/23/2022

Report Date 07/22/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.0	%	95-100
	#8 (2.36mm)	82.3	%	65-95
	#16 (1.18mm)	66.8	%	35-75
	#30 (.6mm)	47.7	%	20-55
	#50 (.3mm)	23.3	%	10-30
	#100 (.15mm)	7.2	%	0-10
	#200 (75µm)	1.8	%	
	FM	2.77		2.6-3
	Wash Loss (#200/75um)	1.3	%	0-3
	Total Moisture	3.1	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 07/17/2022 - 07/23/2022

Report Date 07/22/2022

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)	94.6	%	95-100
	3/8" (9.5mm)	82.5	%	60-95
	#4 (4.75mm)	28.7	%	5-30
	#8 (2.36mm)	9.6	%	0-12
	#16 (1.18mm)	4.3	%	
	#30 (.6mm)	3.2	%	
	#50 (.3mm)	2.9	%	
	#100 (.15mm)	2.6	%	
	#200 (75µm)	2.3	%	
	Wash Loss (#200/75um)	2.2	%	0-3
	Total Moisture	1.2	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 07/17/2022 - 07/23/2022

Report Date 07/22/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.4	%	95-100
	3/4" (19mm)	84.8	%	
	1/2" (12.5mm)	45.5	%	30-60
	3/8" (9.5mm)	22.7	%	
	#4 (4.75mm)	3.9	%	0-8
	#8 (2.36mm)	2.4	%	
	#16 (1.18mm)	2.0	%	
	#30 (.6mm)	1.8	%	
	#50 (.3mm)	1.7	%	
	#100 (.15mm)	1.5	%	
	#200 (75µm)	1.2	%	
	Wash Loss (#200/75um)	1.1	%	0-2
	Total Moisture	1.1	%	