

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

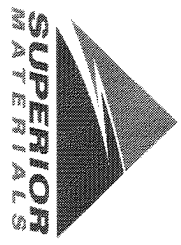
Sample Date: 2/7/22

Dates Test Represents: 2/8/2022 through 2/14/2022

Concrete Grade: S2M

Contractor: _____

MDOT No.: _____



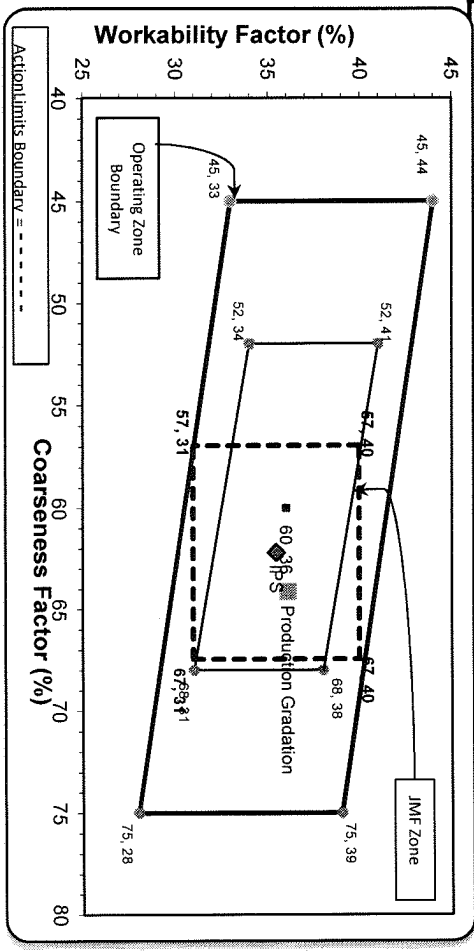
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1520	9.30	2.62	49.8
26A	71-47	Presque Isle	300	1.83	2.62	9.8
2NS	95-013	Smetler 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"	97.6	100.0	100.0	98.8	1.2	1.2
3/4"	82.6	100.0	100.0	91.3	7.5	8.7
1/2"	38.4	98.8	100.0	69.2	22.1	30.8
3/8"	19.6	90.6	100.0	59.0	10.2	41.0
#4	4.1	28.8	98.1	44.4	14.6	55.6
#8	2.8	11.5	83.2	36.1	8.4	63.9
#16	2.6	5.3	67.0	28.8	7.2	71.2
#30	2.5	3.7	47.7	20.8	8.0	79.2
#50	2.4	3.1	23.9	11.1	9.7	88.9
#100	2.3	2.7	7.9	4.6	6.5	95.4
LBW	1.9	2.0	1.5	1.7	2.8	98.3

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 64 Workability Factor: 36



Initial Production Sample (IPS)

Sieve	% Retained	Cumulative % Retained
2"	0.0	0.0
1.5"	0.0	0.0
1"	0.0	0.0
3/4"	6.0	6.0
1/2"	23.7	29.8
3/8"	10.4	40.1
#4	17.2	57.3
#8	7.2	64.5
#16	7.0	71.6
#30	9.2	80.8
#50	10.3	91.1
#100	5.9	96.9
LBW	1.7	98.6

Coarseness Factor: 62 Workability Factor: 35

*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. 1.5") aggregate is used.

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 02/06/2022 - 02/12/2022

Report Date 02/12/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.1	%	95-100
	#8 (2.36mm)	83.2	%	65-95
	#16 (1.18mm)	67.0	%	35-75
	#30 (.6mm)	47.7	%	20-55
	#50 (.3mm)	23.9	%	10-30
	#100 (.15mm)	7.9	%	0-10
	#200 (75µm)	1.9	%	
	FM	2.72		2.6-3
	Wash Loss (#200/75um)	1.5	%	0-3
	Total Moisture	4.7	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 02/06/2022 - 02/12/2022

Report Date 02/12/2022

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)	98.8	%	95-100
	3/8" (9.5mm)	90.6	%	60-95
	#4 (4.75mm)	28.8	%	5-30
	#8 (2.36mm)	11.5	%	0-12
	#16 (1.18mm)	5.3	%	
	#30 (.6mm)	3.7	%	
	#50 (.3mm)	3.1	%	
	#100 (.15mm)	2.7	%	
	#200 (75µm)	2.4	%	
	Wash Loss (#200/75um)	2.0	%	0-3
	Total Moisture	4.8	%	

Plant 958-JMT

Product 1054-6AA LS PI

Period: 02/06/2022 - 02/12/2022

Name/Title Doug Storey / QC Technician

Report Date 02/12/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.6	%	95-100
	3/4" (19mm)	82.6	%	
	1/2" (12.5mm)	38.4	%	30-60
	3/8" (9.5mm)	19.6	%	
	#4 (4.75mm)	4.1	%	0-8
	#8 (2.36mm)	2.8	%	
	#16 (1.18mm)	2.6	%	
	#30 (.6mm)	2.5	%	
	#50 (.3mm)	2.4	%	
	#100 (.15mm)	2.3	%	
	#200 (75µm)	2.2	%	
	Wash Loss (#200/75um)	1.9	%	0-2
	Total Moisture	2.9	%	