

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

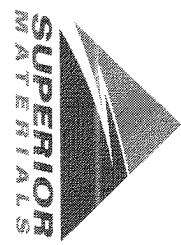
Sample Date: **8/23/21**

Dates Test Represents: **8/24/2021** through **8/30/2021**

Concrete Grade: **S2M**

Contractor: _____

MDOT No.: _____



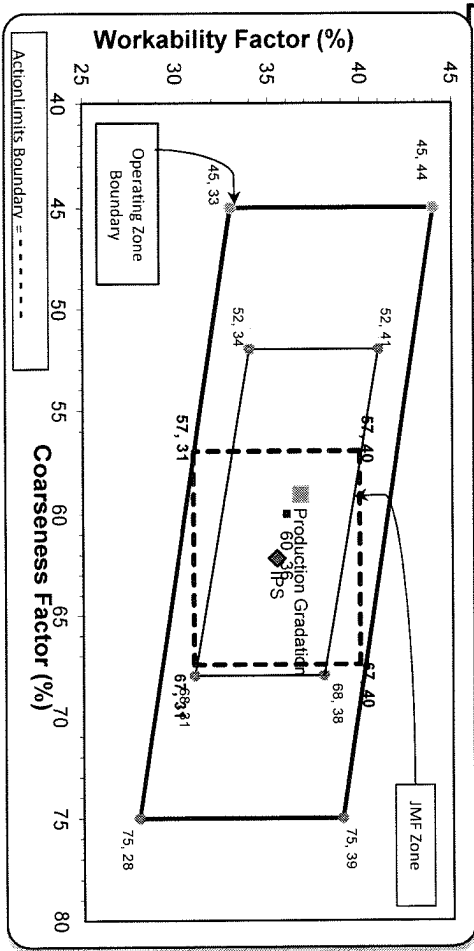
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %	
6AA	71-47	Presque Isle	1600	9.79	2.62	52.5	
26A	71-47	Presque Isle	220	1.35	2.62	7.2	
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3	
Total Wt						3050	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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	87.6	100.0	100.0	93.5	6.5	6.5
1/2"	52.9	95.9	100.0	75.0	18.5	25.0
3/8"	31.0	84.1	100.0	62.7	12.3	37.3
#4	6.1	22.0	97.1	43.9	18.7	56.1
#8	3.1	6.6	85.9	36.7	7.2	63.3
#16	2.5	3.2	69.3	29.5	7.3	70.5
#30	2.4	2.5	49.5	21.4	8.1	78.6
#50	2.2	2.3	22.5	10.4	11.0	89.6
#100	2.1	2.1	5.9	3.6	6.8	96.4
LBW	1.7	1.8	0.6	1.3	2.4	98.7

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **59** Workability Factor: **37**



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

*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: 08/22/2021 - 08/28/2021

Report Date 08/28/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.1	%	95-100
	#8 (2.36mm)	85.9	%	65-95
	#16 (1.18mm)	69.3	%	35-75
	#30 (.6mm)	49.5	%	20-55
	#50 (.3mm)	22.5	%	10-30
	#100 (.15mm)	5.9	%	0-10
	#200 (75µm)	0.8	%	
	FM	2.70		2.6-3
	Wash Loss (#200/75um)	0.6	%	0-3
	Total Moisture	3.5	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 08/22/2021 - 08/28/2021

Report Date 08/28/2021

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)	95.9	%	95-100
	3/8" (9.5mm)	84.1	%	60-95
	#4 (4.75mm)	22.0	%	5-30
	#8 (2.36mm)	6.6	%	0-12
	#16 (1.18mm)	3.2	%	
	#30 (.6mm)	2.5	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75µm)	1.8	%	0-3
	Total Moisture	2.8	%	

Edw. C. Levy Co.

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Plant 958-JMT

Product 1054-6AA LS PI

Period: 08/22/2021 - 08/28/2021

Name/Title Doug Storey / QC Technician

Report Date 08/28/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	100.0	%	95-100
	3/4" (19mm)	87.6	%	
	1/2" (12.5mm)	52.9	%	30-60
	3/8" (9.5mm)	31.0	%	
	#4 (4.75mm)	6.1	%	0-8
	#8 (2.36mm)	3.1	%	
	#16 (1.18mm)	2.5	%	
	#30 (.6mm)	2.4	%	
	#50 (.3mm)	2.2	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75µm)	1.7	%	0-2
	Total Moisture	2.5	%	