

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

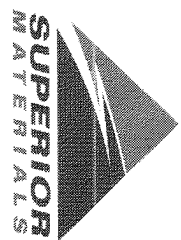
Sample Date: **11/2/20**

Dates Test Represents: **11/3/2020** through **11/9/2020**

Concrete Grade: **S2M**

Contractor: _____

MDOT No.: _____



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

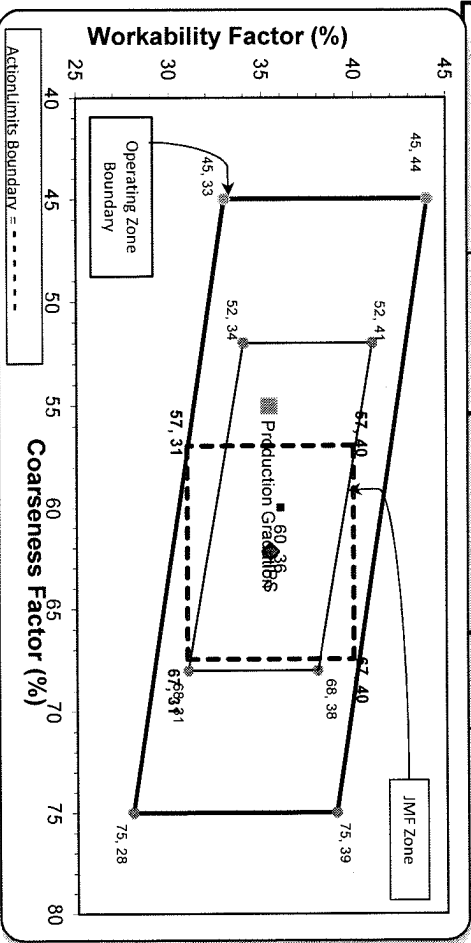
Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1670	10.21	2.62	54.8
26A	71-47	Presque Isle	150	0.92	2.62	4.9
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
Total Wt			3050	18.57		100.0

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"	98.4	100.0	100.0	99.1	0.9	0.9
3/4"	85.9	100.0	100.0	92.3	6.8	7.7
1/2"	53.5	95.4	100.0	74.3	18.0	25.7
3/8"	36.7	81.6	100.0	64.4	9.9	35.6
#4	6.7	17.5	95.1	42.9	21.6	57.1
#8	3.1	5.7	82.8	35.4	7.5	64.6
#16	2.6	3.0	67.3	28.7	6.7	71.3
#30	2.5	2.5	46.5	20.2	8.5	79.8
#50	2.4	2.2	24.4	11.3	9.0	88.7
#100	2.3	2.0	8.6	4.8	6.4	95.2
LBW	1.9	1.4	1.1	1.6	3.3	98.4

*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: **55** Workability Factor: **35**



Initial Production Sample (IPS)

Coarseness Factor:	Workability Factor:	Coarseness Factor:	Workability Factor:
62	35	62	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 1054-6AA LS PI

Period: 11/01/2020 - 11/07/2020

Name/Title Doug Storey / QC Technician

Report Date 11/06/2020

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	98.4	%	95-100
	3/4" (19mm)	85.9	%	
	1/2" (12.5mm)	53.5	%	30-60
	3/8" (9.5mm)	36.7	%	
	#4 (4.75mm)	6.7	%	0-8
	#8 (2.36mm)	3.1	%	
	#16 (1.18mm)	2.6	%	
	#30 (.6mm)	2.5	%	
	#50 (.3mm)	2.4	%	
	#100 (.15mm)	2.3	%	
	#200 (75µm)	2.1	%	
	Wash Loss (#200/75µm)	1.9	%	0-2
	Total Moisture	3.0	%	

Plant 958-JMT

Product 1067-26A Mod LS

Period: 11/01/2020 - 11/07/2020

Name/Title Doug Storey / QC Technician

Report Date 11/06/2020

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)	95.4	%	95-100
	3/8" (9.5mm)	81.6	%	60-95
	#4 (4.75mm)	17.5	%	5-30
	#8 (2.36mm)	5.7	%	0-12
	#16 (1.18mm)	3.0	%	
	#30 (.6mm)	2.5	%	
	#50 (.3mm)	2.2	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	3.7	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 11/01/2020 - 11/07/2020

Report Date 11/06/2020

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)	95.4	%	95-100
	3/8" (9.5mm)	81.6	%	60-95
	#4 (4.75mm)	17.5	%	5-30
	#8 (2.36mm)	5.7	%	0-12
	#16 (1.18mm)	3.0	%	
	#30 (.6mm)	2.5	%	
	#50 (.3mm)	2.2	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	3.7	%	