

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

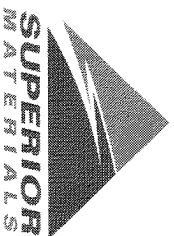
Contractor: _____

Sample Date: **11/1/21**

Concrete Grade: **S2M**

Dates Test Represents: **11/2/2021** through **11/8/2021**

MDOT No.: _____



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

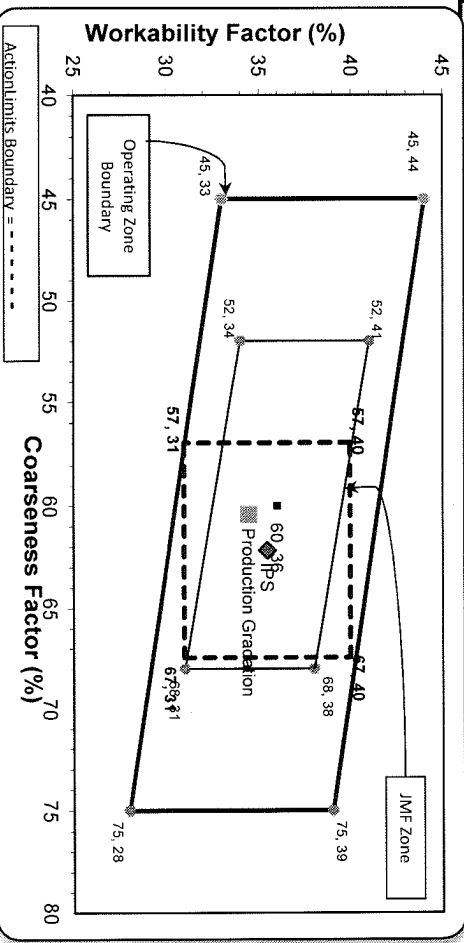
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	320	1.96	2.62	10.5
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
		Total Wt.	3050	18.57		100.0

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"	98.5	100.0	100.0	99.3	0.7	0.7
3/4"	77.7	100.0	100.0	89.0	10.2	11.0
1/2"	36.5	95.6	100.0	68.3	20.7	31.7
3/8"	23.4	81.6	100.0	60.4	7.9	39.6
#4	4.7	16.1	95.0	42.3	18.1	57.7
#8	2.2	5.2	81.4	34.5	7.9	65.5
#16	1.8	3.0	65.3	27.5	6.9	72.5
#30	1.7	2.4	48.0	20.4	7.1	79.6
#50	1.6	2.2	23.3	10.4	10.0	89.6
#100	1.5	1.9	6.6	3.6	6.8	96.4
LBW	1.0	1.4	0.3	0.8	2.8	99.2

*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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Initial Production Sample (IPS)



Sieve	Coarseness Factor:	Workability Factor:	% Retained	Cumulative % Retained
2"	62	35	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

PREPARED BY:
SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-ZNS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 10/31/2021 - 11/06/2021

Report Date 11/02/2021

Procedure	Sieve/Test	Result	Unit	ZNS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.0	%	95-100
	#8 (2.36mm)	81.4	%	65-95
	#16 (1.18mm)	65.3	%	35-75
	#30 (.6mm)	48.0	%	20-55
	#50 (.3mm)	23.3	%	10-30
	#100 (.15mm)	6.6	%	0-10
	#200 (.75um)	1.2	%	
<hr/>				
	FM	2.80		2.6-3
	Wash Loss (#200/75um)	0.3	%	0-3
	Total Moisture	5.0	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 10/31/2021 - 11/06/2021

Report Date 11/05/2021

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)	95.6	%	95-100
3/8" (9.5mm)	81.6	%	60-95
#4 (4.75mm)	16.1	%	5-30
#8 (2.36mm)	5.2	%	0-12
#16 (1.18mm)	3.0	%	
#30 (.6mm)	2.4	%	
#50 (.3mm)	2.2	%	
#100 (.15mm)	1.9	%	
#200 (75um)	1.6	%	
Wash Loss (#200/75um)	1.4	%	0-3
Total Moisture	3.3	%	

Plant 958-JMT

Product 1054-6AA LS PI

Period: 10/31/2021 - 11/06/2021

Name/Title Doug Storey / QC Technician

Report Date 11/05/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	98.5	%	95-100
	3/4" (19mm)	77.7	%	
	1/2" (12.5mm)	36.5	%	30-60
	3/8" (9.5mm)	23.4	%	
	#4 (4.75mm)	4.7	%	0-8
	#8 (2.36mm)	2.2	%	
	#16 (1.18mm)	1.8	%	
	#30 (.6mm)	1.7	%	
	#50 (.3mm)	1.6	%	
	#100 (.15mm)	1.5	%	
	#200 (75µm)	1.3	%	
	Wash Loss (#200/75µm)	1.0	%	0-2
	Total Moisture	2.8	%	