

Aggregate Optimization Chart

Production Gradation Report

PLANT #: 11

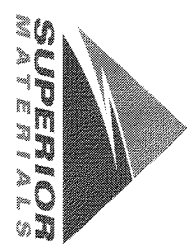
Sample Date: 10/24/22

Dates Test Represents: 10/25/2022 through 10/31/2022

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____



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

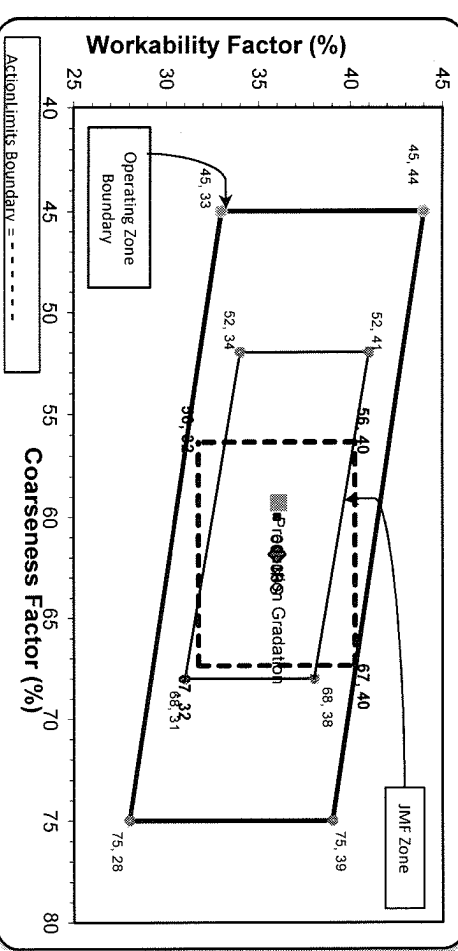
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1555	9.51	2.62	53.5
26A	71-47	Presque Isle	200	1.22	2.62	6.9
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
		Total Wt	2905	17.69		100.0

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"	96.3	100.0	100.0	98.0	2.0	2.0
3/4"	82.3	100.0	100.0	90.5	7.5	9.5
1/2"	47.6	96.8	100.0	71.7	18.8	28.3
3/8"	28.6	83.1	100.0	60.6	11.1	39.4
#4	5.7	24.4	96.4	42.9	17.7	57.1
#8	3.0	6.8	79.6	33.6	9.3	66.4
#16	2.5	3.2	65.1	27.3	6.3	72.7
#30	2.3	2.6	50.3	21.3	6.0	78.7
#50	2.2	2.3	28.1	12.5	8.9	87.5
#100	2.1	2.2	6.6	3.9	8.6	96.1
LBW	1.7	1.9	0.8	1.4	2.5	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **59** Workability Factor: **34** Adjusted W/F: **36.1**



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"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Plant S11-Superior Onsite Jefferson
Product 1022-2NS GR
Period: 10/23/2022 - 10/29/2022

Name/Title Doug Storey / QC Technician
Report Date 10/28/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.4	%	95-100
	#8 (2.36mm)	79.6	%	65-95
	#16 (1.18mm)	65.1	%	35-75
	#30 (.6mm)	50.3	%	20-55
	#50 (.3mm)	28.1	%	10-30
	#100 (.15mm)	6.6	%	0-10
	#200 (75µm)	1.0	%	
	FM	2.74		2.6-3
	Wash Loss (#200/75um)	0.8	%	0-3
	Total Moisture	4.14	%	



Plant S11-Superior Onsite Jefferson

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 10/23/2022 - 10/29/2022

Report Date 10/28/2022

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)	96.8	%	95-100
	3/8" (9.5mm)	83.1	%	60-95
	#4 (4.75mm)	24.4	%	5-30
	#8 (2.36mm)	6.8	%	0-12
	#16 (1.18mm)	3.2	%	
	#30 (.6mm)	2.6	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	2.0	%	
	Wash Loss (#200/75um)	1.9	%	0-3
	Total Moisture	3.05	%	



Plant S11-Superior Onsite Jefferson

Product 1051-6AA LS

Name/Title Doug Storey / QC Technician

Period: 10/23/2022 - 10/29/2022

Report Date 10/28/2022

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	96.3	%	95-100
	3/4" (19mm)	82.3	%	
	1/2" (12.5mm)	47.6	%	30-60
	3/8" (9.5mm)	28.6	%	
	#4 (4.75mm)	5.7	%	0-8
	#8 (2.36mm)	3.0	%	
	#16 (1.18mm)	2.5	%	
	#30 (.6mm)	2.3	%	
	#50 (.3mm)	2.2	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.92	%	
	Wash Loss (#200/75um)	1.7	%	0-2
	Total Moisture	2.80	%	