

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

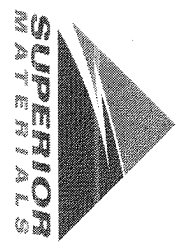
Sample Date: **8/23/21**

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

Concrete Grade: **DM**

Contractor: _____

MDOT No.: _____



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

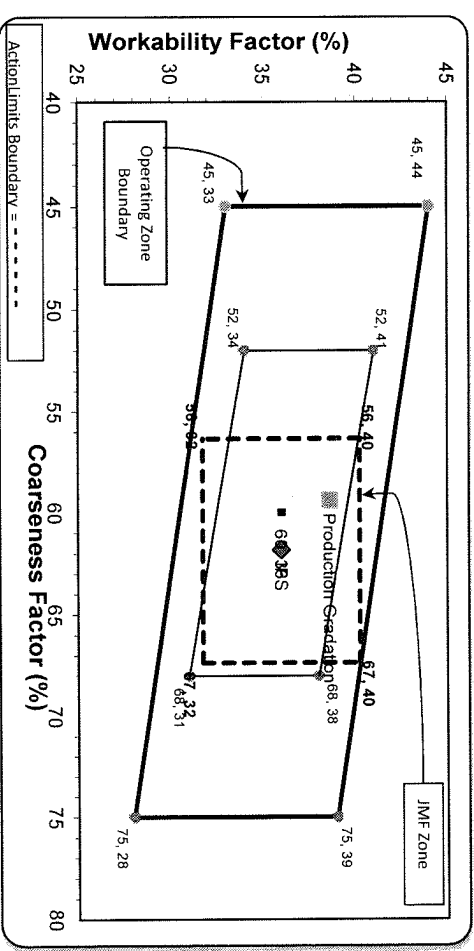
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %	
6AA	71-47	Presque Isle	1550	9.48	2.62	53.4	
26A	71-47	Presque Isle	205	1.25	2.62	7.1	
2NS	95-013	Smeller Bay	1150	6.95	2.65	39.6	
Total Wt						2905	100.0

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	93.4	6.6	6.6
1/2"	52.9	95.9	100.0	74.6	18.8	25.4
3/8"	31.0	84.1	100.0	62.1	12.5	37.9
#4	6.1	22.0	97.1	43.2	18.8	56.8
#8	3.1	6.6	85.9	36.1	7.1	63.9
#16	2.5	3.2	69.3	29.0	7.1	71.0
#30	2.4	2.5	49.5	21.1	7.9	78.9
#50	2.2	2.3	22.5	10.2	10.8	89.8
#100	2.1	2.1	5.9	3.6	6.6	96.4
LBW	1.7	1.8	0.6	1.3	2.3	98.7

*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: **36** Adjusted WF: **38.6**



Sieve	Initial Production Sample (IPS)	Coarseness Factor: 62	Workability Factor: 36	Adjusted WF: 38.6
2"	100.0	100.0	100.0	100.0
1.5"	100.0	100.0	100.0	100.0
1"	100.0	100.0	100.0	100.0
3/4"	96.0	96.0	96.0	96.0
1/2"	72.3	72.3	72.3	72.3
3/8"	60.4	60.4	60.4	60.4
#4	42.6	42.6	42.6	42.6
#8	36.0	36.0	36.0	36.0
#16	29.5	29.5	29.5	29.5
#30	20.3	20.3	20.3	20.3
#50	9.5	9.5	9.5	9.5
#100	3.4	3.4	3.4	3.4
LBW	1.3	1.3	1.3	1.3

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

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

Name/Title Doug Storey / QC Technician

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 (#200/75um)	1.8	%	0-3
	Total Moisture	2.8	%	

Edw. C. Levy Co.

JMT
 8911 W. Jefferson
 Detroit, 48209
 (313) 429-2429

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	%	