

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

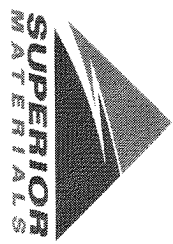
Sample Date: **2/27/23**

Dates Test Represents: **2/28/2023** through **3/6/2023**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____



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

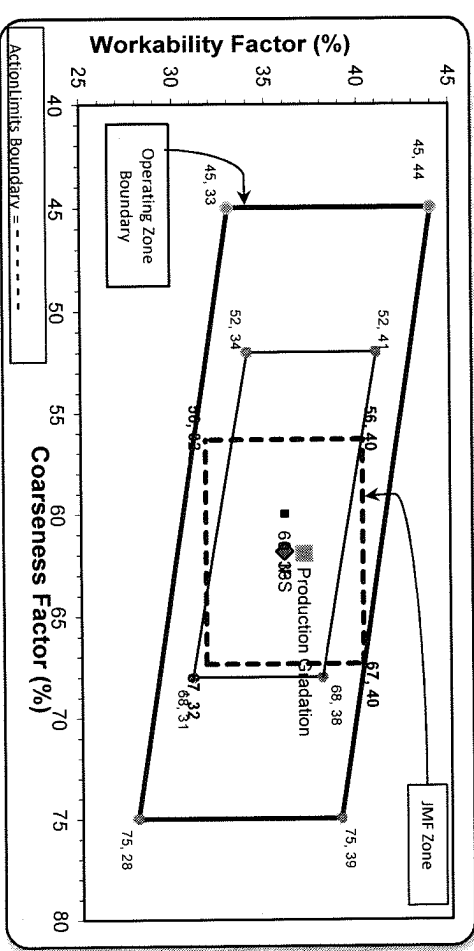
Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1405	8.59	2.62	48.4
26A	71-47	Presque Isle	350	2.14	2.62	12.0
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
			Total Wt	2905		100.0

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"	97.2	100.0	100.0	98.6	1.4	1.4
3/4"	79.9	100.0	100.0	90.3	8.4	9.7
1/2"	38.2	94.4	100.0	69.4	20.8	30.6
3/8"	19.8	85.3	100.0	59.4	10.0	40.6
#4	2.7	20.3	96.3	41.9	17.6	58.1
#8	1.6	5.6	83.6	34.5	7.3	65.5
#16	1.5	2.9	67.9	28.0	6.6	72.0
#30	1.4	2.3	48.6	20.2	7.8	79.8
#50	1.4	2.1	23.4	10.2	10.0	89.8
#100	1.3	2.0	6.8	3.6	6.6	96.4
LBW	1.2	1.7	1.4	1.3	2.2	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: **62** Workability Factor: **35** Adjusted WF: **37.0**



Sieve	Initial Production Sample (IPS)	Coarseness Factor:	Workability Factor:	Adjusted WF
2"	100.0	62	36	37.0
1.5"	100.0			
1"	100.0			
3/4"	95.0			
1/2"	72.3			
3/8"	60.4			
#4	42.6			
#8	36.0			
#16	29.5			
#30	20.3			
#50	9.5			
#100	3.4			
LBW	1.3			

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____

Edw. C. Levy Co.

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

Plant 958-JMT
Product 1054-6AA LS PI
Period: 03/01/2023 - 03/04/2023

Name/Title Doug Storey / QC Technician
Report Date 03/04/2023

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.2	%	95-100
	3/4" (19mm)	79.9	%	
	1/2" (12.5mm)	38.2	%	30-60
	3/8" (9.5mm)	19.8	%	
	#4 (4.75mm)	2.7	%	0-8
	#8 (2.36mm)	1.6	%	
	#16 (1.18mm)	1.5	%	
	#30 (.6mm)	1.4	%	
	#50 (.3mm)	1.4	%	
	#100 (.15mm)	1.3	%	
	#200 (75µm)	1.2	%	
	Wash Loss (#200/75µm)	1.2	%	0-2
	Total Moisture	1.6	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 03/01/2023 - 03/04/2023

Report Date 03/04/2023

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)	94.4	%	95-100
	3/8" (9.5mm)	85.3	%	60-95
	#4 (4.75mm)	20.3	%	5-30
	#8 (2.36mm)	5.6	%	0-12
	#16 (1.18mm)	2.9	%	
	#30 (.6mm)	2.3	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.8	%	
	Wash Loss (#200/75µm)	1.7	%	0-3
	Total Moisture	3.5	%	

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 03/01/2023 - 03/04/2023

Report Date 03/04/2023

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.3	%	95-100
	#8 (2.36mm)	83.6	%	65-95
	#16 (1.18mm)	67.9	%	35-75
	#30 (.6mm)	48.6	%	20-55
	#50 (.3mm)	23.4	%	10-30
	#100 (.15mm)	6.8	%	0-10
	#200 (75µm)	1.6	%	
	FM	2.74		2.6-3
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	5.0	%	