

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

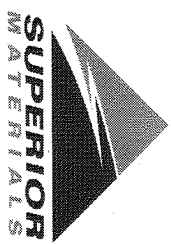
Sample Date: 1/6/20

Dates Test Represents: 1/7/2020 through 1/13/2020

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	1450	8.87	2.62	49.9
26A	71-47	Presque Isle	305	1.87	2.62	10.5
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
			Total Wt	2905		100.0

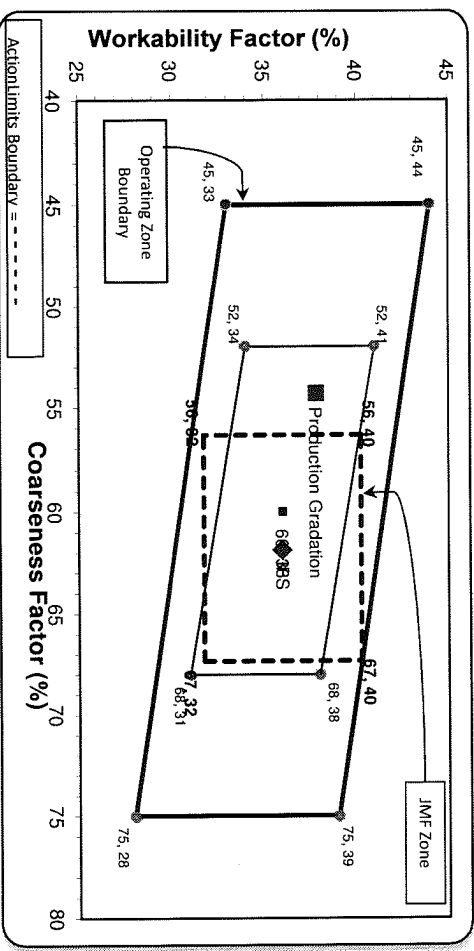
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	97.6	100.0	100.0	98.8	1.2	1.2
3/4"	87.5	100.0	100.0	93.8	5.0	6.2
1/2"	51.5	97.3	100.0	75.5	18.3	24.5
3/8"	32.6	85.9	100.0	64.9	10.6	35.1
#4	6.1	25.2	95.9	43.7	21.2	56.3
#8	3.1	6.9	83.5	35.3	8.3	64.7
#16	2.7	3.6	69.3	29.2	6.2	70.8
#30	2.6	2.9	49.1	21.0	8.1	79.0
#50	2.5	2.6	24.1	11.1	10.0	88.9
#100	2.3	2.4	7.3	4.3	6.8	95.7
LBW	1.9	2.0	0.9	1.5	2.8	98.5

Verify this number is 100%
 *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: 54 Workability Factor: 35 Adjusted WF: 37.8

Initial Production Sample (IPS)
 Coarseness Factor: 62 Workability Factor: 36



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"	97.6	100.0	100.0	98.8	1.2	1.2
3/4"	87.5	100.0	100.0	93.8	5.0	5.0
1/2"	51.5	97.3	100.0	75.5	18.3	24.5
3/8"	32.6	85.9	100.0	64.9	10.6	35.1
#4	6.1	25.2	95.9	43.7	21.2	56.3
#8	3.1	6.9	83.5	35.3	8.3	64.7
#16	2.7	3.6	69.3	29.2	6.2	70.8
#30	2.6	2.9	49.1	21.0	8.1	79.0
#50	2.5	2.6	24.1	11.1	10.0	88.9
#100	2.3	2.4	7.3	4.3	6.8	95.7
LBW	1.9	2.0	0.9	1.5	2.8	98.5

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

Name/Title Doug Storey / QC Technician

Period: 01/05/2020 - 01/11/2020

Report Date 01/09/2020

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.6	%	95-100
	3/4" (19mm)	87.5	%	
	1/2" (12.5mm)	51.5	%	30-60
	3/8" (9.5mm)	32.6	%	
	#4 (4.75mm)	6.1	%	0-8
	#8 (2.36mm)	3.1	%	
	#16 (1.18mm)	2.7	%	
	#30 (0.6mm)	2.6	%	
	#50 (0.3mm)	2.5	%	
	#100 (0.15mm)	2.3	%	
	#200 (75µm)	2.0	%	
	Wash Loss (#200/75um)	1.9	%	0-2
	Total Moisture	3.6	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 01/05/2020 - 01/11/2020

Report Date 01/09/2020

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)	97.3	%	95-100
	3/8" (9.5mm)	85.9	%	60-95
	#4 (4.75mm)	25.2	%	5-30
	#8 (2.36mm)	6.9	%	0-12
	#16 (1.18mm)	3.6	%	
	#30 (0.6mm)	2.9	%	
	#50 (0.3mm)	2.6	%	
	#100 (0.15mm)	2.4	%	
	#200 (75µm)	2.1	%	
	Wash Loss (#200/75um)	2.0	%	0-3
	Total Moisture	3.8	%	

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 01/05/2020 - 01/11/2020

Report Date 01/09/2020

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.9	%	95-100
	#8 (2.36mm)	83.5	%	65-95
	#16 (1.18mm)	69.3	%	35-75
	#30 (0.6mm)	49.1	%	20-55
	#50 (0.3mm)	24.1	%	10-30
	#100 (0.15mm)	7.3	%	0-10
	#200 (75µm)	1.1	%	
	FM	2.71		2.6-3
	Wash Loss (#200/75um)	0.9	%	0-3
	Total Moisture	4.7	%	