

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: **2/21/22**

Dates Test Represents: **2/22/2022** through **2/28/2022**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

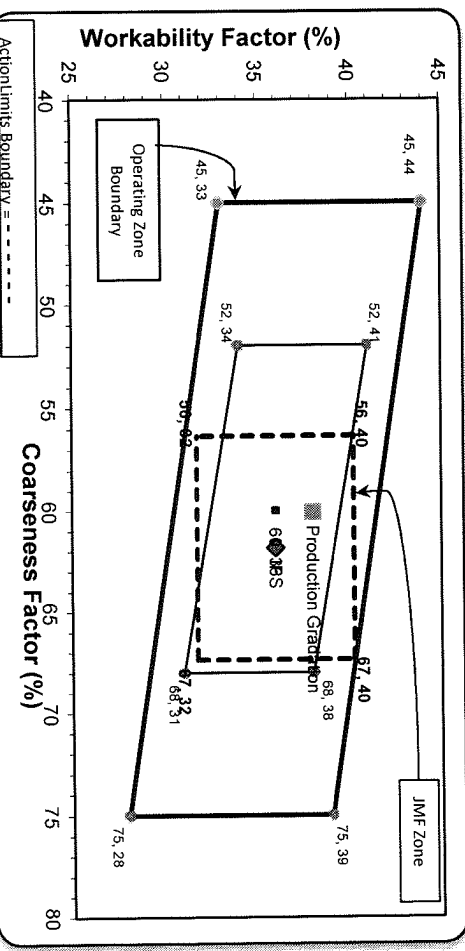
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	97.8	100.0	100.0	98.9	1.1	1.1
3/4"	87.5	100.0	100.0	93.7	5.2	6.3
1/2"	45.5	98.0	100.0	72.5	21.2	27.5
3/8"	25.7	85.2	100.0	61.3	11.2	38.7
#4	5.4	24.1	95.8	43.1	18.1	56.9
#8	3.1	10.6	83.0	35.5	7.6	64.5
#16	2.4	4.3	67.6	28.4	7.1	71.6
#30	2.2	3.4	48.3	20.6	7.8	79.4
#50	2.0	2.8	24.4	11.0	9.6	89.0
#100	1.9	2.5	7.4	4.1	6.8	95.9
LBW	1.3	1.9	1.3	1.4	2.8	98.6

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

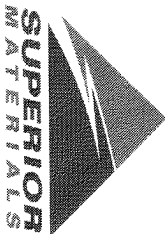
Coarseness Factor:	60	Workability Factor:	36	Adjusted WF	38.0
--------------------	----	---------------------	----	-------------	------

Initial Production Sample (IPS)

Coarseness Factor:	62
--------------------	----



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



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

*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.

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 02/20/2022 - 02/26/2022

Report Date 02/25/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.8	%	95-100
	#8 (2.36mm)	83.0	%	65-95
	#16 (1.18mm)	67.6	%	35-75
	#30 (.6mm)	48.3	%	20-55
	#50 (.3mm)	24.4	%	10-30
	#100 (.15mm)	7.4	%	0-10
	#200 (75µm)	2.0	%	
	FM	2.74		2.6-3
	Wash Loss (#200/75um)	1.3	%	0-3
	Total Moisture	5.2	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 02/20/2022 - 02/26/2022

Report Date 02/25/2022

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)	98.0	%	95-100
	3/8" (9.5mm)	85.2	%	60-95
	#4 (4.75mm)	24.1	%	5-30
	#8 (2.36mm)	10.6	%	0-12
	#16 (1.18mm)	4.3	%	
	#30 (.6mm)	3.4	%	
	#50 (.3mm)	2.8	%	
	#100 (.15mm)	2.5	%	
	#200 (75µm)	2.1	%	
	Wash Loss (#200/75um)	1.9	%	0-3
	Total Moisture	5.3	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 02/20/2022 - 02/26/2022

Report Date 02/25/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.8	%	95-100
	3/4" (19mm)	87.5	%	
	1/2" (12.5mm)	45.5	%	30-60
	3/8" (9.5mm)	25.7	%	
	#4 (4.75mm)	5.4	%	0-8
	#8 (2.36mm)	3.1	%	
	#16 (1.18mm)	2.4	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75um)	1.3	%	0-2
	Total Moisture	3.6	%	