

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: **10/11/21**

Dates Test Represents: **10/12/2021**

through **10/18/2021**

Concrete Grade: **S2M**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1250	7.65	2.62	41.0
26A	71-47	Presque Isle	570	3.49	2.62	18.7
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
		Total Wt	3050			100.0

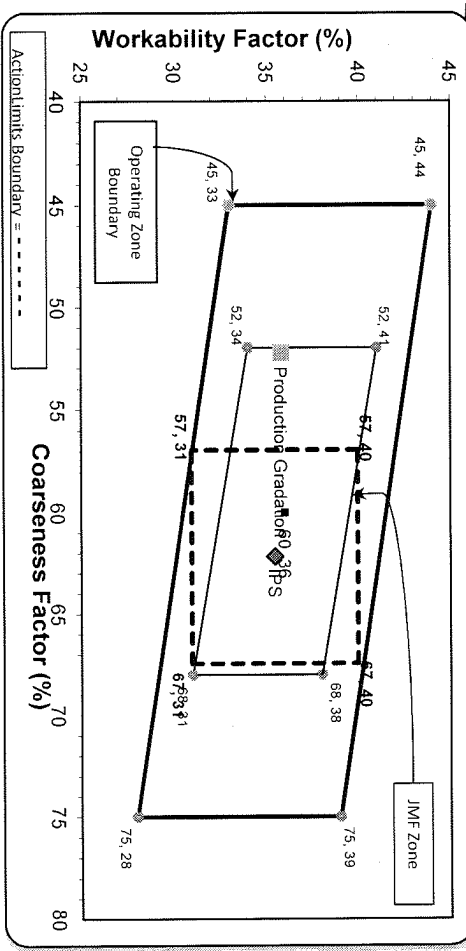
<----- Verify this number is 100%>

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"	99.4	100.0	100.0	99.8	0.2	0.2
3/4"	85.0	100.0	100.0	93.9	5.9	6.1
1/2"	42.8	96.9	100.0	76.0	17.9	24.0
3/8"	24.6	85.8	100.0	66.4	9.5	33.6
#4	4.3	20.8	96.3	44.5	22.0	55.5
#8	2.3	6.7	83.3	35.8	8.7	64.2
#16	2.0	3.4	68.0	28.9	6.9	71.1
#30	1.8	2.7	48.7	20.9	8.0	79.1
#50	1.8	2.4	24.7	11.1	9.7	88.9
#100	1.7	2.2	7.8	4.3	6.9	95.7
LBW	1.2	1.7	1.8	1.5	2.7	98.5

*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.

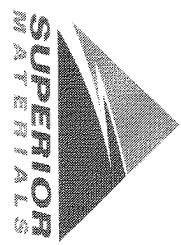
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **52** Workability Factor: **36**



Initial Production Sample (IPS)

Sieve	Coarseness Factor:	Workability Factor:	% Retained	Cumulative % Retained
2"	62	35	0.0	0.0
1.5"			0.0	0.0
1"			0.0	0.0
3/4"			6.0	6.0
1/2"			23.7	29.8
3/8"			10.4	40.1
#4			17.2	57.3
#8			7.2	64.5
#16			7.0	71.6
#30			9.2	80.8
#50			10.3	91.1
#100			5.9	96.9
LBW			1.7	98.6



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

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 10/10/2021 - 10/16/2021

Report Date 10/14/2021

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)	83.3	%	65-95
	#16 (1.18mm)	68.0	%	35-75
	#30 (.6mm)	48.7	%	20-55
	#50 (.3mm)	24.7	%	10-30
	#100 (.15mm)	7.8	%	0-10
	#200 (75µm)	2.0	%	
	FM	2.71		2.6-3
	Wash Loss (#200/75um)	1.8	%	0-3
	Total Moisture	4.3	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 10/10/2021 - 10/16/2021

Report Date 10/14/2021

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)	96.9	%	95-100
	3/8" (9.5mm)	85.8	%	60-95
	#4 (4.75mm)	20.8	%	5-30
	#8 (2.36mm)	6.7	%	0-12
	#16 (1.18mm)	3.4	%	
	#30 (.6mm)	2.7	%	
	#50 (.3mm)	2.4	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75um)	1.7	%	0-3
	Total Moisture	2.9	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 10/10/2021 - 10/16/2021

Report Date 10/14/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	99.4	%	95-100
	3/4" (19mm)	85.0	%	
	1/2" (12.5mm)	42.8	%	30-60
	3/8" (9.5mm)	24.6	%	
	#4 (4.75mm)	4.3	%	0-8
	#8 (2.36mm)	2.3	%	
	#16 (1.18mm)	2.0	%	
	#30 (.6mm)	1.8	%	
	#50 (.3mm)	1.8	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.4	%	
	Wash Loss (#200/75um)	1.2	%	0-2
	Total Moisture	2.9	%	