Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-36

Sample Date: 8/17/20

Concrete Grade: S2M

Contractor: _____

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	350	2.14	2.62	11.5
2NS	63-92	Grange Hall	1200	7.26	2.65	39.3
		Total Wt	**3050**	**18.57**		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"	97.1	100.0	100.0	98.6	1.4	1.4
3/4"	65.2	100.0	100.0	82.9	15.7	17.1
1/2"	36.2	98.5	100.0	68.5	14.4	31.5
3/8"	20.1	87.1	100.0	59.2	9.2	40.8
#4	5.9	26.5	97.6	44.3	14.9	55.7
#8	3.2	8.5	86.1	36.4	7.9	63.6
#16	2.3	4.3	72.1	30.0	6.4	70.0
#30	2.1	3.5	49.7	21.0	9.0	79.0
#50	2.0	3.3	19.9	9.2	11.8	90.8
#100	1.8	3.0	2.7	2.3	6.9	97.7
LBW	1.7	2.6	0.8	1.4	0.8	98.6

*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.

Superior Materials, LLC
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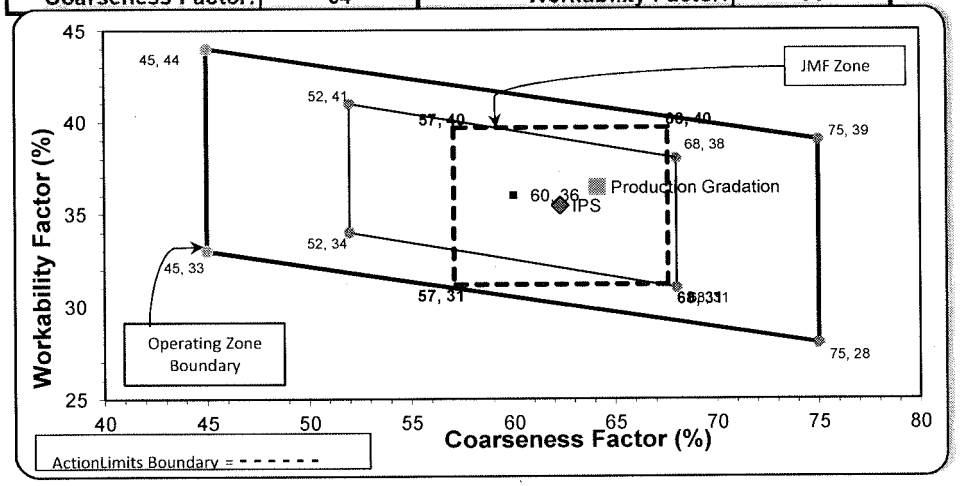
Suite 500
Farmington Hills, MI 48336

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	64	Workability Factor:	36



Intial Production Sample (IPS)

Coarseness Factor:	62
Workability Factor:	35

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.1	0.9	0.9
3/4"	90.5	8.6	9.5
1/2"	69.8	20.7	30.2
3/8"	59.8	10.0	40.2
#4	42.2	17.6	57.8
#8	35.4	6.7	64.6
#16	28.8	6.7	71.2
#30	21.4	7.4	78.6
#50	8.8	12.6	91.2
#100	1.8	7.0	98.2
LBW	0.7	1.0	99.3

PREPARED BY:
SM, LLC Technical Service

Approved By:

2470 Auburn Road
Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills

Product 1051-6AA LS

Period: 08/16/2020 - 08/22/2020

Name/Title Doug Storey / QC Technician

Report Date 08/21/2020

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.1	%	95-100
	3/4" (19mm)	65.2	%	
	1/2" (12.5mm)	36.2	%	30-60
	3/8" (9.5mm)	20.1	%	
	#4 (4.75mm)	5.9	%	0-8
	#8 (2.36mm)	3.2	%	
	#16 (1.18mm)	2.3	%	
	#30 (.6mm)	2.1	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	1.8	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.6	%	0-2
	Total Moisture	2.36	%	

2470 Auburn Road
Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills

Product 1067-26A Mod LS

Period: 08/16/2020 - 08/22/2020

Name/Title Doug Storey / QC Technician

Report Date 08/21/2020

Procedure	Sieve/Test	Result	Unit	26A 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)	98.5	%	95-100
	3/8" (9.5mm)	87.1	%	60-95
	#4 (4.75mm)	26.5	%	5-30
	#8 (2.36mm)	8.5	%	0-12
	#16 (1.18mm)	4.3	%	
	#30 (.6mm)	3.5	%	
	#50 (.3mm)	3.3	%	
	#100 (.15mm)	3.0	%	
	#200 (75µm)	2.6	%	
	Wash Loss (#200/75um)	2.4	%	0-3
	Total Moisture	2.27	%	

2470 Auburn Road
Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills

Product 1022-2NS GR

Period: 08/16/2020 - 08/22/2020

Name/Title Doug Storey / QC Technician

Report Date 08/21/2020

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.6	%	95-100
	#8 (2.36mm)	86.1	%	65-95
	#16 (1.18mm)	72.1	%	35-75
	#30 (.6mm)	49.7	%	20-55
	#50 (.3mm)	19.9	%	10-30
	#100 (.15mm)	2.7	%	0-10
	#200 (75µm)	0.8	%	
	FM	2.72		2.6-3
	Wash Loss (#200/75um)	0.8	%	0-3
	Total Moisture	3.36	%	