

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-36

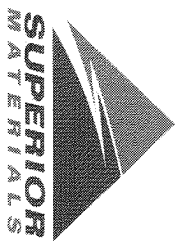
Sample Date: 3/30/20

Dates Test Represents: 3/31/2020 through 4/6/2020

Concrete Grade: DM

Contractor: _____

MDOT No.: _____



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

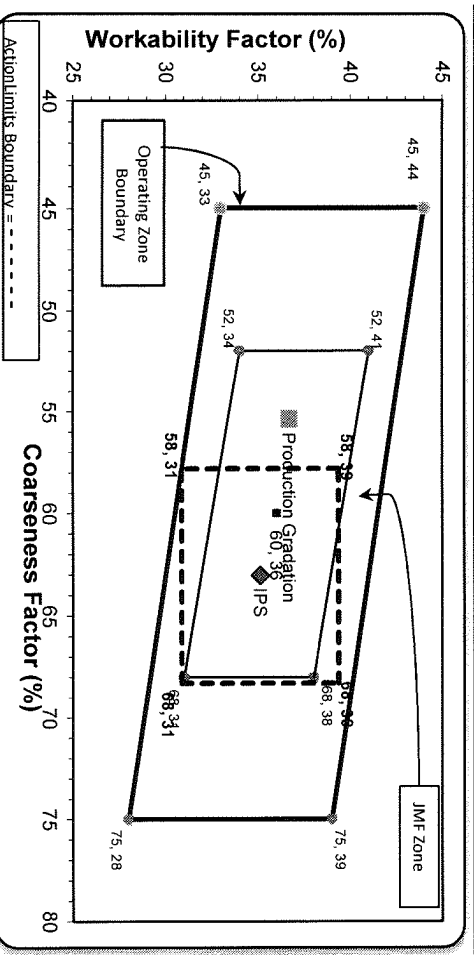
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution	
6AA	71-47	Presque Isle	1400	8.56	2.62	48.2	
26A	71-47	Presque Isle	405	2.48	2.62	13.9	
2NS	63-92	Grange Hill	1100	6.65	2.65	37.9	
Total Wt						2905	100.0

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"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	85.3	100.0	100.0	92.9	6.8	7.1
1/2"	48.8	97.7	100.0	75.0	17.9	25.0
3/8"	26.5	92.7	100.0	63.6	11.4	36.4
#4	4.5	24.9	97.7	42.6	20.9	57.4
#8	2.3	6.7	84.9	34.2	8.4	65.8
#16	1.9	3.5	70.0	27.9	6.3	72.1
#30	1.8	2.9	50.8	20.5	7.4	79.5
#50	1.8	2.7	21.4	9.3	11.2	90.7
#100	1.7	2.5	4.5	2.9	6.5	97.1
LBW	1.6	2.2	1.6	1.7	1.2	98.3

*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: 55 Workability Factor: 34 Adjusted WF: 36.7



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"	90.3	8.8	9.7
1/2"	69.2	21.1	30.8
3/8"	59.1	10.1	40.9
#4	41.8	17.3	58.2
#8	35.1	6.6	64.9
#16	28.5	6.6	71.5
#30	21.2	7.3	78.8
#50	8.7	12.5	91.3
#100	1.8	7.0	98.2
LBW	0.7	1.0	99.3

Initial Production Sample (IPS)
 Coarseness Factor: 63
 Workability Factor: 35

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



2470 Auburn Road
Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills

Product 1051-6AA LS

Name/Title Doug Storey / QC Technician

Period: 03/29/2020 - 04/04/2020

Report Date 04/04/2020

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	99.4	%	95-100
	3/4" (19mm)	85.3	%	
	1/2" (12.5mm)	48.8	%	30-60
	3/8" (9.5mm)	26.5	%	
	#4 (4.75mm)	4.5	%	0-8
	#8 (2.36mm)	2.3	%	
	#16 (1.18mm)	1.9	%	
	#30 (.6mm)	1.8	%	
	#50 (.3mm)	1.8	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.61	%	
	Wash Loss (#200/75um)	1.6	%	0-2
	Total Moisture	1.18	%	



2470 Auburn Road
Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 03/29/2020 - 04/04/2020

Report Date 04/04/2020

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)	97.7	%	95-100
	3/8" (9.5mm)	92.7	%	60-95
	#4 (4.75mm)	24.9	%	5-30
	#8 (2.36mm)	6.7	%	0-12
	#16 (1.18mm)	3.5	%	
	#30 (.6mm)	2.9	%	
	#50 (.3mm)	2.7	%	
	#100 (.15mm)	2.5	%	
	#200 (75µm)	2.3	%	
	Wash Loss (#200/75um)	2.2	%	0-3
	Total Moisture	4.47	%	



2470 Auburn Road
Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 03/29/2020 - 04/04/2020

Report Date 04/04/2020

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.7	%	95-100
	#8 (2.36mm)	84.9	%	65-95
	#16 (1.18mm)	70.0	%	35-75
	#30 (.6mm)	50.8	%	20-55
	#50 (.3mm)	21.4	%	10-30
	#100 (.15mm)	4.5	%	0-10
	#200 (75µm)	1.8	%	
	FM	2.71		2.6-3
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	3.96	%	