Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-102

Sample Date: 4/25/22

Concrete Grade: DM, 4500HP

Dates Test Represents: 4/26/2022 through 5/2/2022

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	54.1
26A	58-003	Stoneco	205	1.22	2.69	6.9
2NS	81-019	Pleasant Lake	1150	6.95	2.65	38.9
		Total Wt	**2955**	**17.71**		100.0

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

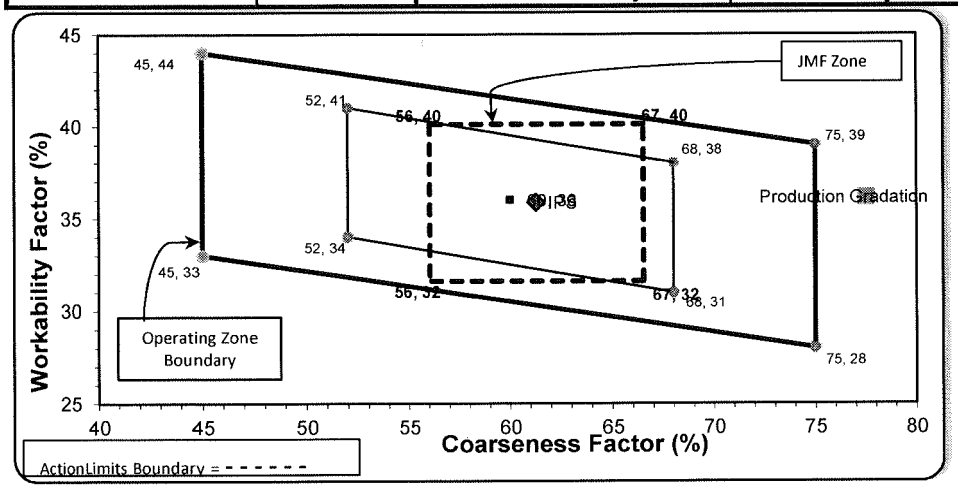
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	79.1	100.0	100.0	88.7	11.3	11.3
1/2"	30.5	99.5	100.0	62.3	26.3	37.7
3/8"	6.6	87.2	100.0	48.5	13.8	51.5
#4	1.1	13.3	98.3	39.8	8.8	60.2
#8	1.0	5.2	84.1	33.6	6.1	66.4
#16	0.9	3.8	66.8	26.7	6.9	73.3
#30	0.9	3.3	48.6	19.6	7.1	80.4
#50	0.8	3.1	23.1	9.6	10.0	90.4
#100	0.7	3.0	6.8	3.2	6.4	96.8
LBW	0.4	2.4	1.9	1.1	2.1	98.9

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.

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	78	Workability Factor:	34	Adjusted WF: 36.1



Intial Production Sample (IPS)

Coarseness Factor:	61
Workability Factor:	36

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

PREPARED BY:
SM, LLC Technical Service

Approved By:

Plant S102-Superior Novi

Product 1022-2NS GR

Period: 04/24/2022 - 04/30/2022

Name/Title Doug Storey / QC Technician

Report Date 04/29/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.3	%	95-100
	#8 (2.36mm)	84.1	%	65-95
	#16 (1.18mm)	66.8	%	35-75
	#30 (.6mm)	48.6	%	20-55
	#50 (.3mm)	23.1	%	10-30
	#100 (.15mm)	6.8	%	0-10
	#200 (75µm)	1.9	%	
	FM	2.72		2.6-3
	Wash Loss (#200/75um)	1.9	%	0-3
	Total Moisture	4.09	%	

Plant S102-Superior Novi

Product 1067-26A Mod LS

Period: 04/24/2022 - 04/30/2022

Name/Title Doug Storey / QC Technician

Report Date 04/29/2022

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)	99.5	%	95-100
	3/8" (9.5mm)	87.2	%	60-95
	#4 (4.75mm)	13.3	%	5-30
	#8 (2.36mm)	5.2	%	0-12
	#16 (1.18mm)	3.8	%	
	#30 (.6mm)	3.3	%	
	#50 (.3mm)	3.1	%	
	#100 (.15mm)	3.0	%	
	#200 (75µm)	2.7	%	
	Wash Loss (#200/75um)	2.4	%	0-3
	Total Moisture	3.47	%	

Plant S102-Superior Novi

Product 1051-6AA LS

Period: 04/24/2022 - 04/30/2022

Name/Title Doug Storey / QC Technician

Report Date 04/29/2022

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	100.0	%	95-100
	3/4" (19mm)	79.1	%	
	1/2" (12.5mm)	30.5	%	30-60
	3/8" (9.5mm)	6.6	%	
	#4 (4.75mm)	1.1	%	0-8
	#8 (2.36mm)	1.0	%	
	#16 (1.18mm)	0.9	%	
	#30 (.6mm)	0.9	%	
	#50 (.3mm)	0.8	%	
	#100 (.15mm)	0.7	%	
	#200 (75µm)	0.56	%	
	Wash Loss (#200/75um)	0.4	%	0-2
	Total Moisture	2.67	%	