

Aggregate Optimization Chart

PLANT #: **P-103**

Sample Date: 6/16/25

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: 6/17/2025 through 6/23/2025

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	51.6
26A	58-003	Stoneco	300	1.79	2.69	9.7
2NS	63-114	Highland	1200	7.26	2.65	38.7
Total Wt			3100	18.58		100.0

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



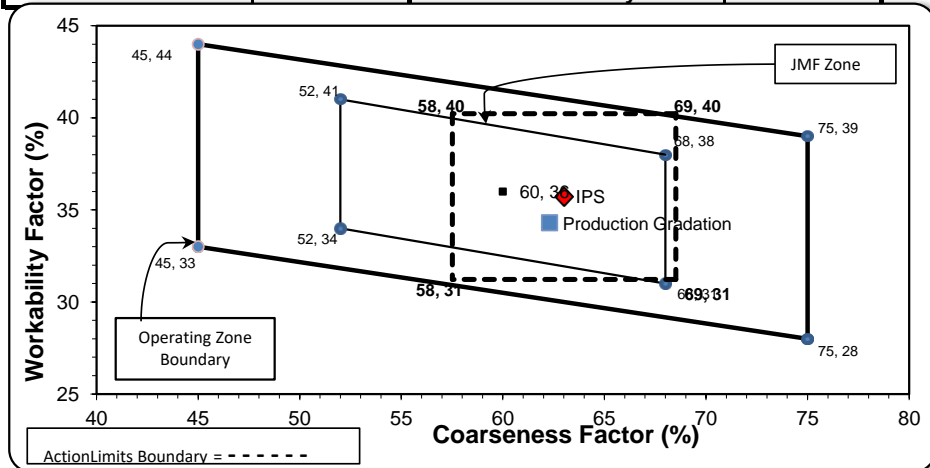
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	98.8	100.0	100.0	99.4	0.6	0.6
3/4"	80.3	100.0	100.0	89.8	9.5	10.2
1/2"	43.6	98.8	100.0	70.8	19.1	29.2
3/8"	23.7	84.0	100.0	59.1	11.7	40.9
#4	4.7	14.5	99.1	42.2	16.9	57.8
#8	2.1	3.6	84.9	34.3	7.9	65.7
#16	1.4	1.7	67.3	26.9	7.4	73.1
#30	1.2	1.2	48.0	19.3	7.6	80.7
#50	1.2	1.1	21.3	9.0	10.3	91.0
#100	1.1	1.1	3.5	2.0	6.9	98.0
LBW	1.2	0.9	0.5	0.9	1.1	99.1

*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 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	62	Workability Factor:	34
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Initial Production Sample (IPS)

Coarseness Factor:	63		
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"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

PREPARED BY:
 SM, LLC Technical Service

Approved BY:

Aggregate Optimization Chart

PLANT #: p11

Sample Date: 6/16/25

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: 6/17/2025 through 6/23/2025

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1520	9.30	2.62	49.8
26A	71-47	Presque Isle	300	1.83	2.62	9.8
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
Total Wt			3050	18.57		100.0

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



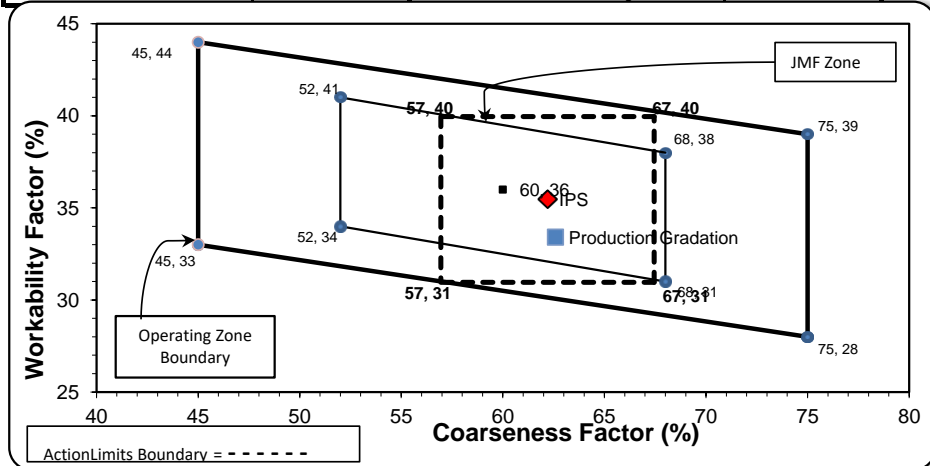
Superior Materials, LLC
 30701 W. 10 Mile Rd.
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Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.0	100.0	100.0	99.5	0.5	0.5
3/4"	78.7	100.0	100.0	89.4	10.1	10.6
1/2"	40.2	96.2	100.0	69.8	19.6	30.2
3/8"	19.5	84.2	100.0	58.3	11.5	41.7
#4	2.6	19.2	95.6	41.7	16.6	58.3
#8	1.7	7.2	79.0	33.4	8.3	66.6
#16	1.6	4.2	62.5	26.4	7.0	73.6
#30	1.6	3.4	46.9	20.0	6.4	80.0
#50	1.5	3.1	25.8	11.5	8.6	88.5
#100	1.5	2.9	7.1	3.9	7.6	96.1
LBW	1.2	2.7	1.1	1.3	2.6	98.7

*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 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 63 **Workability Factor:** 33



Initial 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"	100.0	0.0	0.0
3/4"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

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