

Aggregate Optimization Chart

MIX ID'S: DDS257E7 and DDS257E8

Production Gradation Report

PLANT #: **P-103**

Sample Date: 5/29/17

Concrete Grade: **S2M**

Contractor: _____

Dates Test Represents: 5/29/2017 to 6/4/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1530	9.11	2.69	48.6
26A	58-003	Stoneco	350	2.09	2.69	11.1
2NS	81-93	Burmeister	1265	7.68	2.64	40.2
Total Wt			3145	18.88		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"	99.9	100.0	100.0	100.0	0.0	0.0
3/4"	82.8	100.0	100.0	91.6	8.3	8.4
1/2"	44.5	99.6	100.0	73.0	18.7	27.0
3/8"	21.4	84.8	100.0	60.1	12.9	39.9
#4	2.9	17.0	98.9	43.1	17.0	56.9
#8	0.8	4.0	85.5	35.2	7.9	64.8
#16	0.6	2.0	69.3	28.4	6.8	71.6
#30	0.6	1.6	48.4	19.9	8.5	80.1
#50	0.6	1.5	18.4	7.9	12.1	92.1
#100	0.4	1.4	3.1	1.6	6.3	98.4
LBW	0.4	1.2	0.9	0.7	0.9	99.3

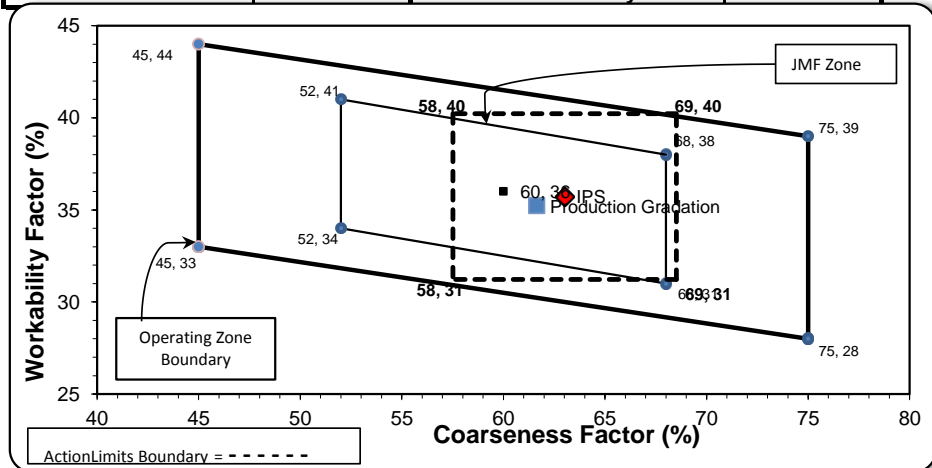


Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

*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: 62 **Workability Factor: 35**



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

MIX ID'S: WSN175E9

Production Gradation Report

PLANT #: P-36

Sample Date: 5/29/17

Dates Test Represents: 5/29/2017 to 6/4/2017

Concrete Grade: **S2M (SPECIAL, 5000 PSI)**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1580	9.41	2.69	52.8
26A	71-47	Presque Isle	210	1.28	2.62	7.0
2NS	63-92	AA Grange Hall	1200	7.26	2.65	40.1
Total Wt			2990	17.95		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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	82.8	100.0	100.0	90.9	9.0	9.1
1/2"	44.5	97.4	100.0	70.5	20.4	29.5
3/8"	21.4	88.2	100.0	57.6	12.9	42.4
#4	2.9	13.4	98.0	41.8	15.8	58.2
#8	0.8	2.7	86.2	35.2	6.6	64.8
#16	0.6	1.5	70.9	28.9	6.3	71.1
#30	0.6	1.4	50.8	20.8	8.1	79.2
#50	0.6	1.3	21.1	8.9	11.9	91.1
#100	0.4	1.2	2.9	1.5	7.4	98.5
LBW	0.4	1.0	0.3	0.4	1.1	99.6

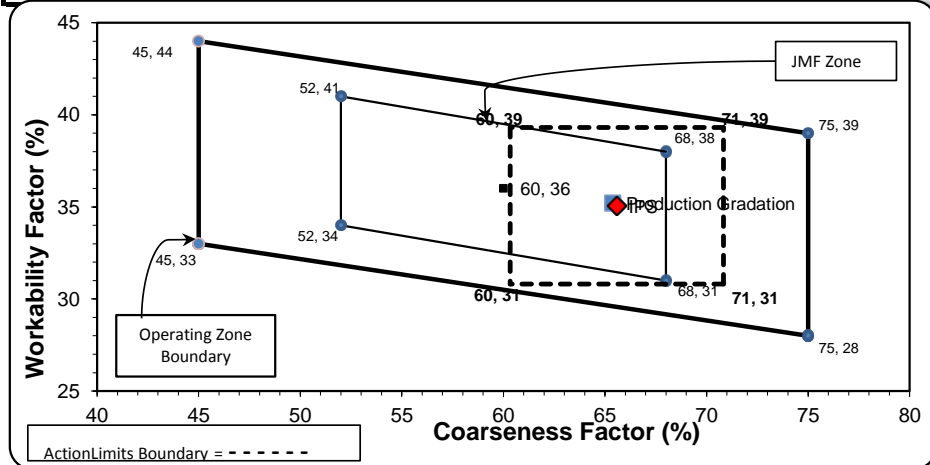
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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 65 Workability Factor: 35



Initial Production Sample (IPS)

Coarseness Factor: 66		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"	91.7	8.3	8.3
1/2"	66.8	24.8	33.2
3/8"	57.4	9.4	42.6
#4	43.0	14.4	57.0
#8	35.1	7.9	64.9
#16	28.0	7.1	72.0
#30	19.5	8.5	80.5
#50	8.1	11.4	91.9
#100	2.0	6.1	98.0
LBW	0.7	1.3	99.3

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Approved By:

Aggregate Optimization Chart

MIX ID'S: DDS257E7 and DDS257E8

Production Gradation Report

PLANT #: **P-38**

Sample Date: 5/29/17

Concrete Grade: **S2M**

Contractor: _____

Dates Test Represents: 5/29/2017 to 6/4/2017

MDOT No.: _____

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3/4"	82.8	100.0	100.0	91.6	8.3	8.4
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#4	2.9	17.0	98.9	43.1	17.0	56.9
#8	0.8	4.0	85.5	35.2	7.9	64.8
#16	0.6	2.0	69.3	28.4	6.8	71.6
#30	0.6	1.6	48.4	19.9	8.5	80.1
#50	0.6	1.5	18.4	7.9	12.1	92.1
#100	0.4	1.4	3.1	1.6	6.3	98.4
LBW	0.4	1.2	0.9	0.7	0.9	99.3

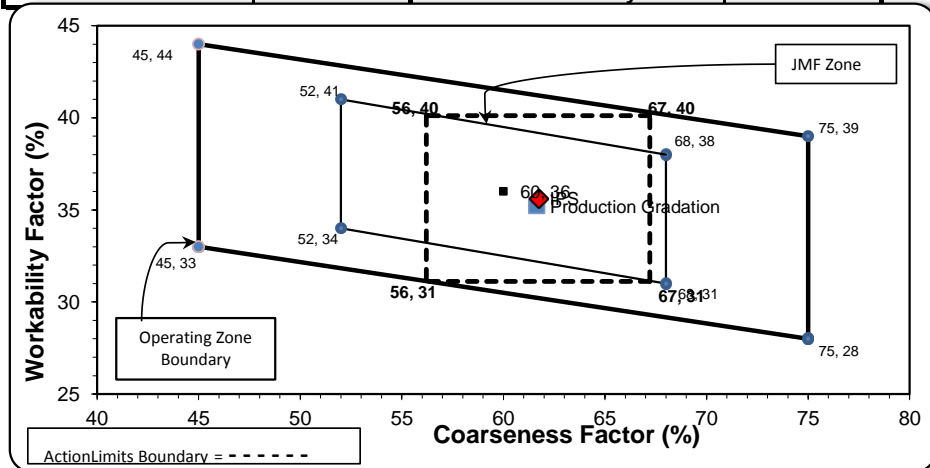


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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **62** Workability Factor: **35**



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2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	91.1	8.1	8.9
1/2"	72.0	19.1	28.0
3/8"	60.3	11.7	39.7
#4	43.4	16.9	56.6
#8	35.6	7.8	64.4
#16	28.4	7.2	71.6
#30	21.8	6.7	78.2
#50	9.1	12.6	90.9
#100	1.7	7.4	98.3
LBW	1.1	0.6	98.9

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