

Aggregate Optimization Chart

MIX ID'S: DDS257E7 and DDS257E8

Production Gradation Report

PLANT #: **P-103**

Sample Date: 6/12/17

Concrete Grade: **S2M**

Contractor: _____

Dates Test Represents: 6/12/2017 to 6/18/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	50.7
26A	58-003	Stoneco	255	1.52	2.69	8.1
2NS	81-93	Burmeister	1300	7.89	2.64	41.2
Total Wt			3155	18.94		100.0

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



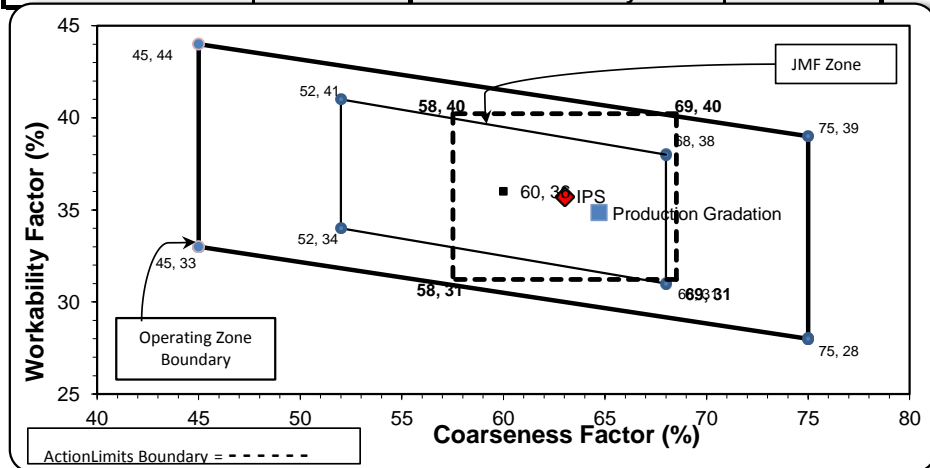
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	78.5	100.0	100.0	89.1	10.9	10.9
1/2"	37.8	99.7	100.0	68.4	20.7	31.6
3/8"	19.2	85.3	100.0	57.8	10.6	42.2
#4	3.0	20.8	98.4	43.7	14.1	56.3
#8	0.8	5.5	82.5	34.8	8.9	65.2
#16	0.7	2.5	65.8	27.7	7.2	72.3
#30	0.5	1.9	48.1	20.2	7.4	79.8
#50	0.5	1.7	21.9	9.4	10.8	90.6
#100	0.4	1.6	4.2	2.1	7.4	97.9
LBW	0.3	1.4	1.1	0.7	1.3	99.3

*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:	65	Workability Factor:	35
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Initial Production Sample (IPS)

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: 6/12/17

Dates Test Represents: 6/12/2017 to 6/18/2017

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

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1520	9.06	2.69	50.8
26A	71-47	Presque Isle	260	1.59	2.62	8.7
2NS	63-92	AA Grange Hall	1210	7.32	2.65	40.5
Total Wt			2990	17.96		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"	78.5	100.0	100.0	89.1	10.9	10.9
1/2"	37.8	96.8	100.0	68.1	21.0	31.9
3/8"	19.2	83.6	100.0	57.5	10.6	42.5
#4	3.0	10.9	98.1	42.2	15.3	57.8
#8	0.8	2.9	87.5	36.1	6.1	63.9
#16	0.7	2.1	71.4	29.4	6.6	70.6
#30	0.5	2.0	51.7	21.4	8.1	78.6
#50	0.5	1.9	20.7	8.8	12.6	91.2
#100	0.4	1.8	2.7	1.5	7.3	98.5
LBW	0.3	1.7	0.3	0.4	1.0	99.6

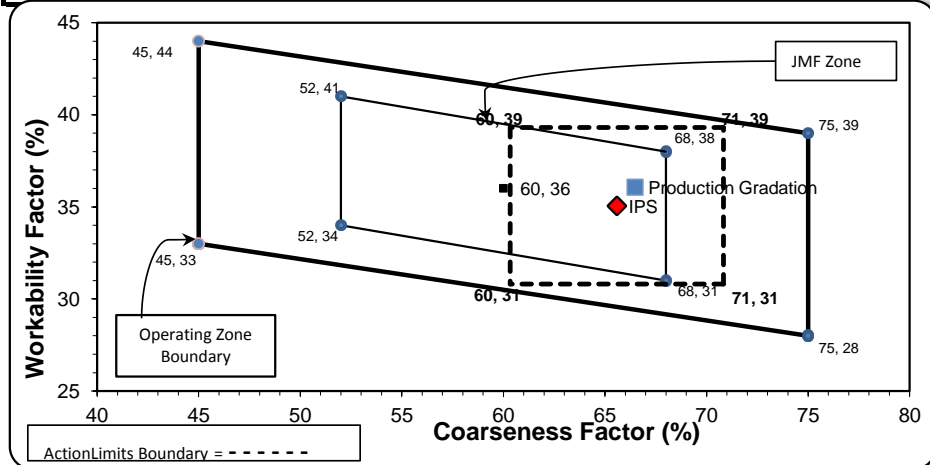
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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 66 **Workability Factor: 36**



Initial Production Sample (IPS)

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: 6/12/17

Concrete Grade: **S2M**

Contractor: _____

Dates Test Represents: 6/12/2017 to 6/18/2017

MDOT No.: _____

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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"	78.5	100.0	100.0	89.1	10.9	10.9
1/2"	37.8	99.7	100.0	68.4	20.7	31.6
3/8"	19.2	85.3	100.0	57.8	10.6	42.2
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#8	0.8	5.5	82.5	34.8	8.9	65.2
#16	0.7	2.5	65.8	27.7	7.2	72.3
#30	0.5	1.9	48.1	20.2	7.4	79.8
#50	0.5	1.7	21.9	9.4	10.8	90.6
#100	0.4	1.6	4.2	2.1	7.4	97.9
LBW	0.3	1.4	1.1	0.7	1.3	99.3

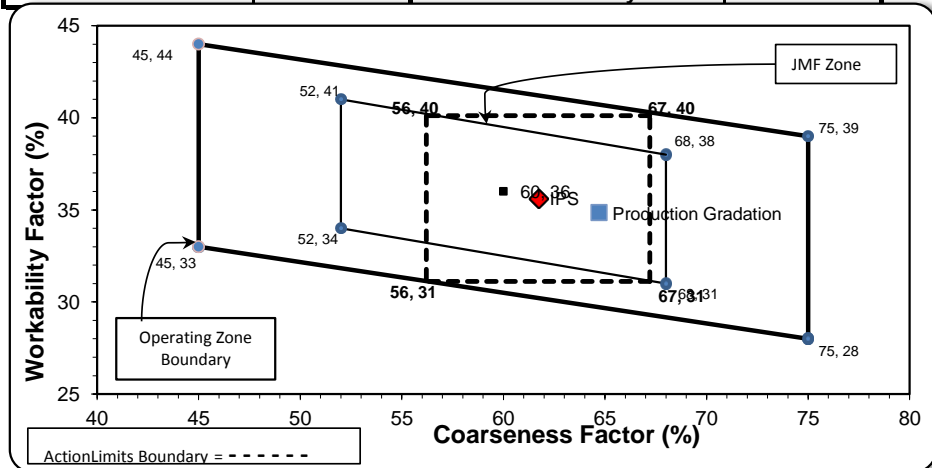


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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

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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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 SM, LLC Technical Service

Approved By: