

Aggregate Optimization Chart

MIX ID'S: DDS257E7, DDS257E5 and DDS257E8

Production Gradation Report

PLANT #: **P-103**

Sample Date: 10/2/17

Concrete Grade: **S2M**

Contractor: _____

Dates Test Represents: 10/2/2017 to 10/8/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1500	8.94	2.69	47.5
26A	58-003	Stoneco	355	2.11	2.69	11.3
2NS	81-93	Burmeister	1300	7.89	2.64	41.2
Total Wt			3155	18.94		100.0

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



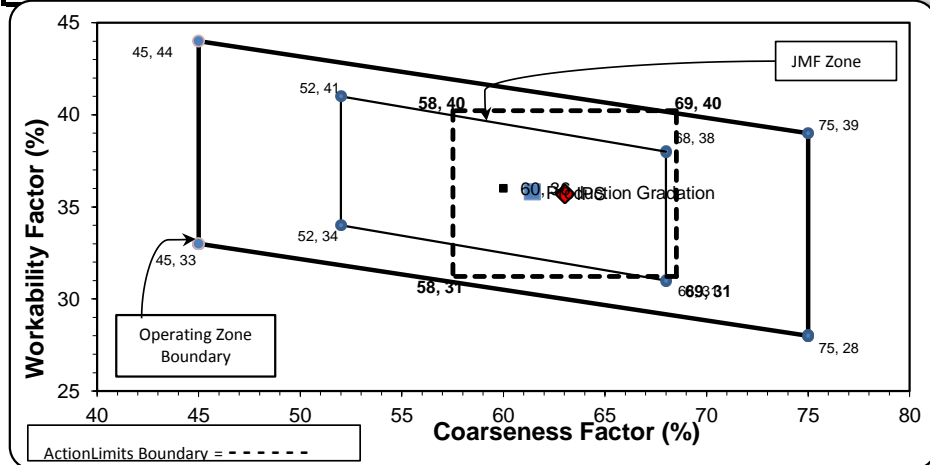
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	99.6	100.0	100.0	99.8	0.2	0.2
3/4"	84.2	100.0	100.0	92.5	7.3	7.5
1/2"	43.5	99.5	100.0	73.1	19.4	26.9
3/8"	20.0	87.6	100.0	60.6	12.5	39.4
#4	2.4	21.0	97.0	43.5	17.1	56.5
#8	1.2	4.2	84.4	35.8	7.7	64.2
#16	1.0	1.4	69.6	29.3	6.5	70.7
#30	0.9	1.0	49.5	20.9	8.4	79.1
#50	0.8	0.9	19.0	8.3	12.6	91.7
#100	0.7	0.8	3.5	1.9	6.4	98.1
LBW	0.6	0.6	1.2	0.8	1.0	99.2

*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: **61** Workability Factor: **36**



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: DDS257E7 and DDS257E8

Production Gradation Report

PLANT #: **P-32**

Sample Date: 10/2/17

Concrete Grade: **S2M**

Contractor: _____

Dates Test Represents: 10/2/2017 to 10/8/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1550	9.48	2.62	49.8
26A	71-47	Presque Isle	250	1.53	2.62	8.0
2NS	95-13	Smelter Bay	1310	7.92	2.65	42.1
Total Wt			3110	18.93		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"	87.6	100.0	100.0	93.8	6.2	6.2
1/2"	42.4	96.5	100.0	71.0	22.8	29.0
3/8"	22.7	82.8	100.0	60.1	10.9	39.9
#4	3.7	14.0	96.6	43.7	16.4	56.3
#8	2.0	3.6	82.4	36.0	7.7	64.0
#16	1.7	2.2	65.8	28.7	7.3	71.3
#30	1.7	2.0	45.3	20.1	8.7	79.9
#50	1.6	1.8	18.9	8.9	11.2	91.1
#100	1.5	1.8	5.6	3.3	5.7	96.7
LBW	1.4	1.5	2.1	1.7	1.5	98.3

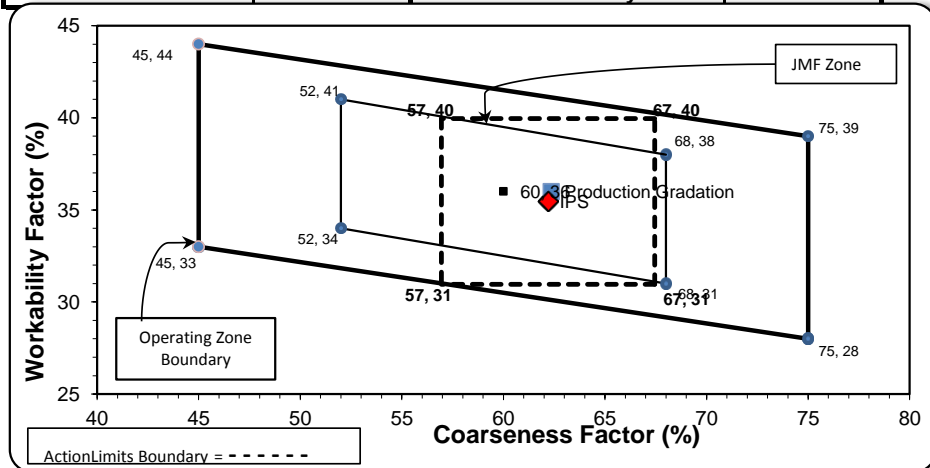


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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 62 **Workability Factor: 36**



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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Aggregate Optimization Chart

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Production Gradation Report

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Concrete Grade: **S2M**

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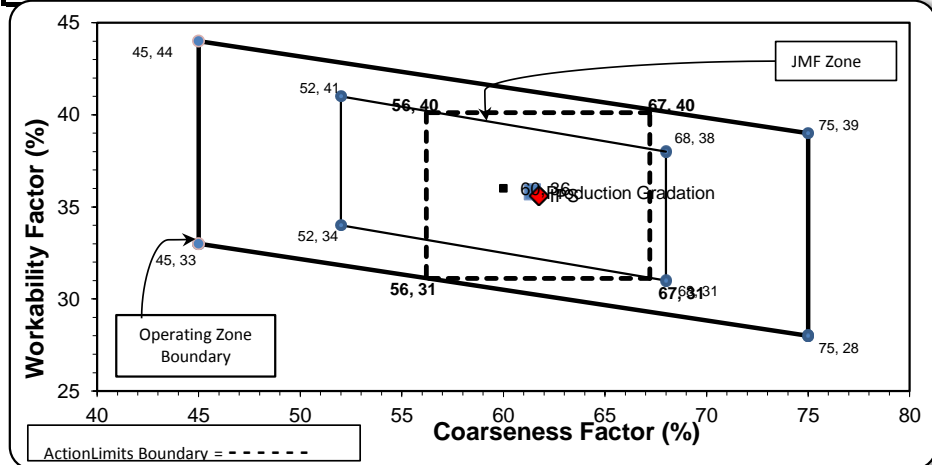


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#30	21.8	6.7	78.2
#50	9.1	12.6	90.9
#100	1.7	7.4	98.3
LBW	1.1	0.6	98.9

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