

Aggregate Optimization Chart

MIX ID'S: DDS257E7 and DDS257E8

Production Gradation Report

PLANT #: **P-103**

Sample Date: 1/30/17

Concrete Grade: **S2M**

Contractor: _____

Dates Test Represents: 1/30/2017 to 2/5/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1415	8.43	2.69	44.8
26A	58-003	Stoneco	450	2.68	2.69	14.3
2NS	81-93	Burmeister	1290	7.83	2.64	40.9
Total Wt			3155	18.94		100.0

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



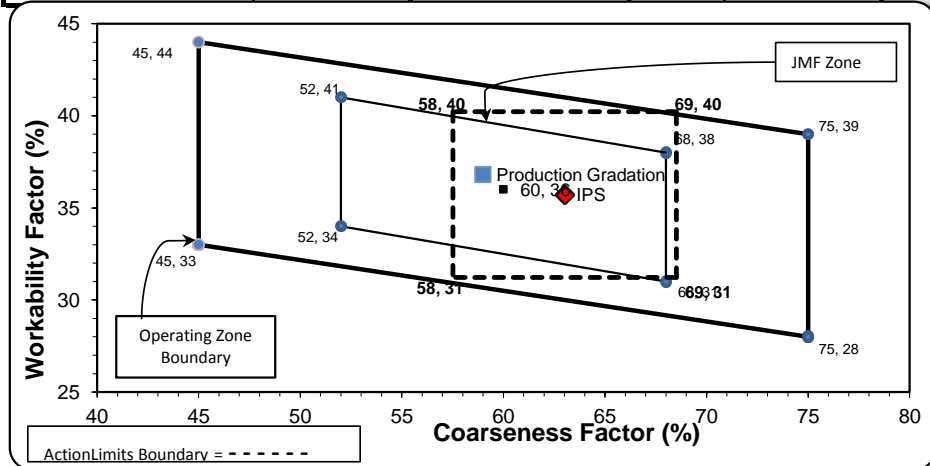
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	85.2	100.0	100.0	93.4	6.6	6.6
1/2"	41.8	99.8	100.0	73.9	19.5	26.1
3/8"	21.1	86.7	100.0	62.7	11.2	37.3
#4	4.1	13.8	99.2	44.4	18.3	55.6
#8	1.8	3.0	87.0	36.8	7.6	63.2
#16	1.2	1.5	72.0	30.2	6.6	69.8
#30	1.0	1.2	52.2	22.0	8.2	78.0
#50	0.9	1.1	18.7	8.2	13.8	91.8
#100	0.8	1.0	2.5	1.5	6.7	98.5
LBW	1.0	0.8	0.7	0.8	0.7	99.2

*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 13% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 5% 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:	59	Workability Factor:	37
---------------------------	-----------	----------------------------	-----------



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-38**

Sample Date: 1/30/17

Concrete Grade: **S2M**

Contractor: _____

Dates Test Represents: 1/30/2017 to 2/5/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1415	8.43	2.69	44.8
26A	58-003	Stoneco	450	2.68	2.69	14.3
2NS	81-93	Burmeister	1290	7.83	2.64	40.9
Total Wt			3155	18.94		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"	85.2	100.0	100.0	93.4	6.6	6.6
1/2"	41.8	99.8	100.0	73.9	19.5	26.1
3/8"	21.1	86.7	100.0	62.7	11.2	37.3
#4	4.1	13.8	99.2	44.4	18.3	55.6
#8	1.8	3.0	87.0	36.8	7.6	63.2
#16	1.2	1.5	72.0	30.2	6.6	69.8
#30	1.0	1.2	52.2	22.0	8.2	78.0
#50	0.9	1.1	18.7	8.2	13.8	91.8
#100	0.8	1.0	2.5	1.5	6.7	98.5
LBW	1.0	0.8	0.7	0.8	0.7	99.2

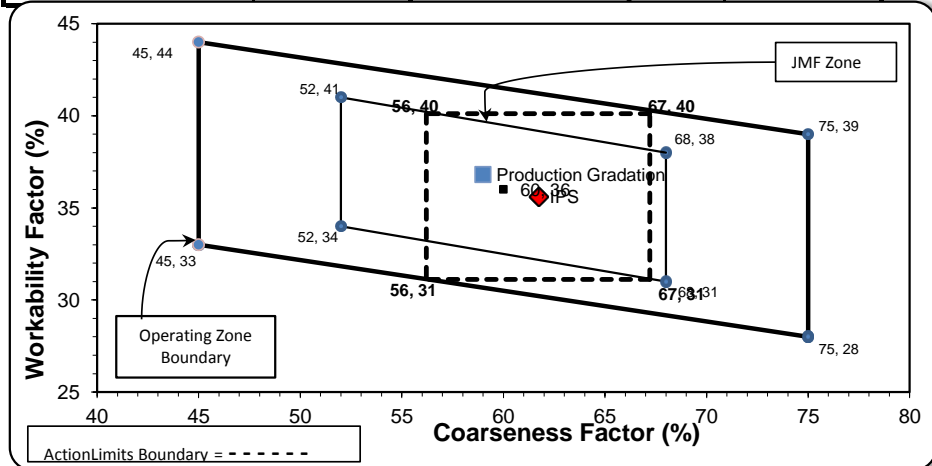


Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 13% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 5% 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: **59** Workability Factor: **37**



Initial Production Sample (IPS)

Coarseness Factor: 62		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"	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

PREPARED BY:
 SM, LLC Technical Service

Approved By: