

Aggregate Optimization Chart

MIX ID'S: DDD0K7E7 and DDD0K7E9

Production Gradation Report

PLANT #: **P-103**

Sample Date: 1/16/17

Concrete Grade: **DM**

Contractor: _____

Dates Test Represents: 1/16/2017 to 1/22/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1350	8.04	2.69	45.2
26A	58-003	Stoneco	420	2.50	2.69	14.0
2NS	81-93	Burmeister	1220	7.41	2.64	40.8
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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	84.2	100.0	100.0	92.9	7.1	7.1
1/2"	40.0	99.8	100.0	72.9	20.0	27.1
3/8"	18.2	87.6	100.0	61.3	11.6	38.7
#4	2.9	16.4	99.4	44.2	17.2	55.8
#8	1.8	3.9	87.4	37.0	7.1	63.0
#16	1.7	2.0	72.0	30.4	6.6	69.6
#30	1.6	1.6	52.2	22.2	8.2	77.8
#50	1.6	1.4	20.6	9.3	12.9	90.7
#100	1.5	1.4	3.8	2.4	6.9	97.6
LBW	1.5	1.3	1.4	1.4	1.0	98.6

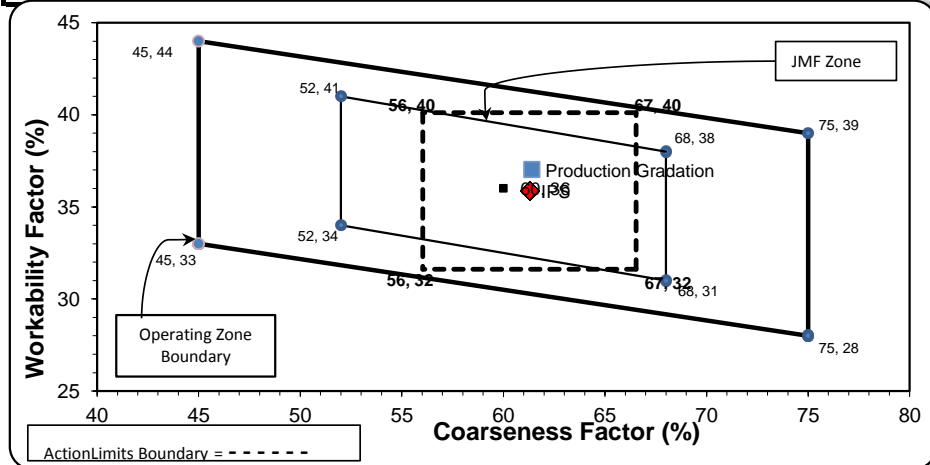


Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

*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: 61 **Workability Factor: 37**



Initial Production Sample (IPS)

Coarseness Factor: 61		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"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

PREPARED BY:
 SM, LLC Technical Service

Approved BY:

Aggregate Optimization Chart

MIX ID'S: DDD0K7E7 and DDD0K7E9

Production Gradation Report

PLANT #: **P-38**

Sample Date: 1/16/17

Concrete Grade: **DM**

Contractor: _____

Dates Test Represents: 1/16/2017 to 1/22/2017

MDOT No.: _____

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6AA	58-003	Stoneco	1350	8.04	2.69	45.2
26A	58-003	Stoneco	420	2.50	2.69	14.0
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1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	84.2	100.0	100.0	92.9	7.1	7.1
1/2"	40.0	99.8	100.0	72.9	20.0	27.1
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#4	2.9	16.4	99.4	44.2	17.2	55.8
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#16	1.7	2.0	72.0	30.4	6.6	69.6
#30	1.6	1.6	52.2	22.2	8.2	77.8
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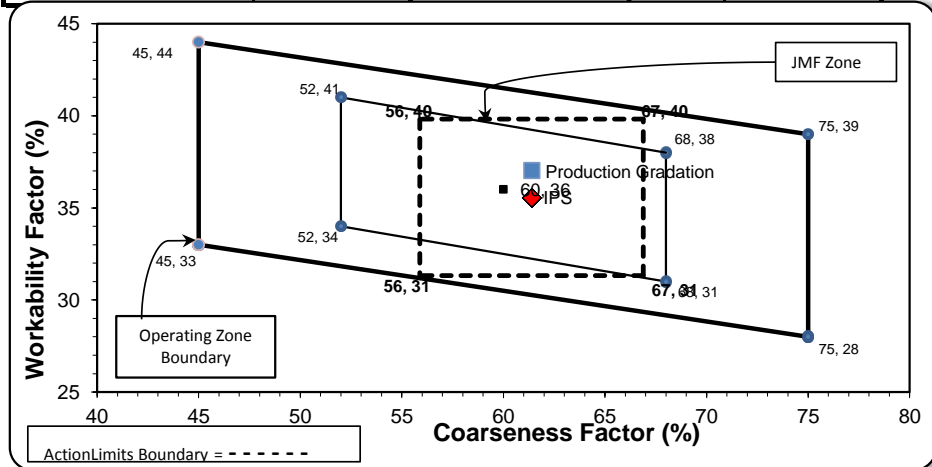


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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

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Initial Production Sample (IPS)

Coarseness Factor:		61	
Workability Factor:		36	
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1/2"	70.5	18.6	29.5
3/8"	60.5	10.0	39.5
#4	44.1	16.4	55.9
#8	35.6	8.5	64.4
#16	27.7	7.9	72.3
#30	20.6	7.1	79.4
#50	8.7	11.8	91.3
#100	1.6	7.1	98.4
LBW	1.1	0.6	98.9

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 SM, LLC Technical Service

Approved By: