

Aggregate Optimization Chart

MIX ID'S: DDT0F7ET

Production Gradation Report

PLANT #: **P-102**

Sample Date: 9/3/18 Concrete Grade: **TM**
 Dates Test Represents: 9/4/2018 through 9/10/2018

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1445	8.61	2.69	47.5
26A	58-003	Stoneco	400	2.38	2.69	13.1
2NS	38-046	Chelsea	1200	7.26	2.65	39.4
Total Wt			3045	18.25		100.0

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



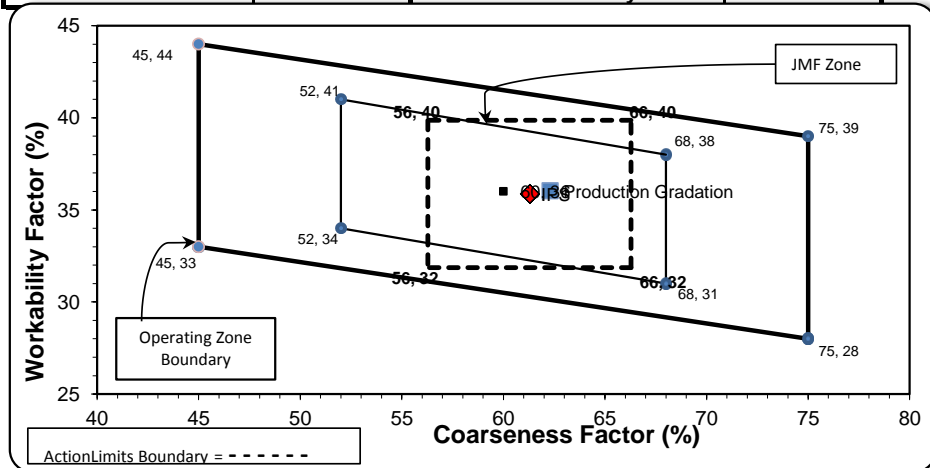
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	99.8	100.0	100.0	99.9	0.1	0.1
3/4"	81.0	100.0	100.0	91.0	8.9	9.0
1/2"	40.0	99.8	100.0	71.5	19.5	28.5
3/8"	19.9	86.0	100.0	60.1	11.4	39.9
#4	3.0	18.4	100.0	43.2	16.9	56.8
#8	1.3	5.6	88.0	36.0	7.2	64.0
#16	1.2	2.9	64.0	26.2	9.9	73.8
#30	1.0	2.0	42.0	17.3	8.9	82.7
#50	0.9	1.8	24.0	10.1	7.2	89.9
#100	0.8	1.7	5.0	2.6	7.5	97.4
LBW	0.6	1.6	0.6	0.7	1.8	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:	62	Workability Factor:	36
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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: DDT0F7ET

Production Gradation Report

PLANT #: **P-36**

Sample Date: 9/3/18 Concrete Grade: **TM**
 Dates Test Represents: 9/4/2018 through 9/10/2018

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1595	9.76	2.62	53.3
26A	71-47	Presque Isle	200	1.22	2.62	6.7
2NS	63-92	AA Grange Hall	1200	7.26	2.65	40.1
Total Wt			2995	18.24		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"	99.5	100.0	100.0	99.7	0.3	0.3
3/4"	85.0	100.0	100.0	92.0	7.7	8.0
1/2"	46.8	95.8	100.0	71.4	20.6	28.6
3/8"	24.3	80.3	100.0	58.4	13.0	41.6
#4	2.7	19.4	96.8	41.5	16.9	58.5
#8	1.4	6.5	83.0	34.4	7.1	65.6
#16	1.2	3.7	66.9	27.7	6.7	72.3
#30	1.2	3.1	48.6	20.3	7.4	79.7
#50	1.2	2.8	23.3	10.2	10.2	89.8
#100	1.1	2.5	4.5	2.6	7.6	97.4
LBW	0.9	2.0	0.4	0.8	1.8	99.2

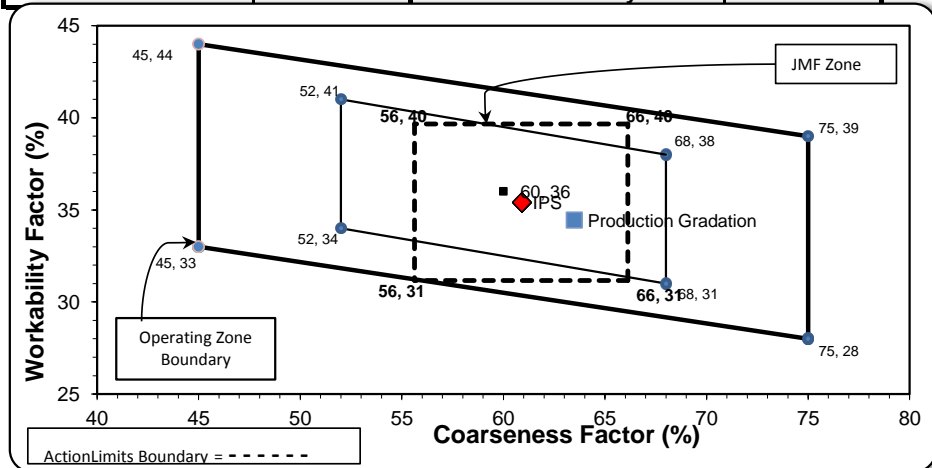


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*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must 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:	63	Workability Factor:	34
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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"	100.0	0.0	0.0
3/4"	95.9	4.1	4.1
1/2"	74.3	21.5	25.7
3/8"	60.7	13.6	39.3
#4	42.6	18.1	57.4
#8	35.4	7.2	64.6
#16	28.7	6.7	71.3
#30	20.5	8.2	79.5
#50	9.8	10.7	90.2
#100	2.1	7.7	97.9
LBW	0.9	1.2	99.1

PREPARED BY:
 SM, LLC Technical Service

Approved By: