

Aggregate Optimization Chart

MIX ID'S: DDT0F7ET

Production Gradation Report

PLANT #: **P-102**

Sample Date: 7/16/18

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 7/17/2018 through 7/23/2018

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%



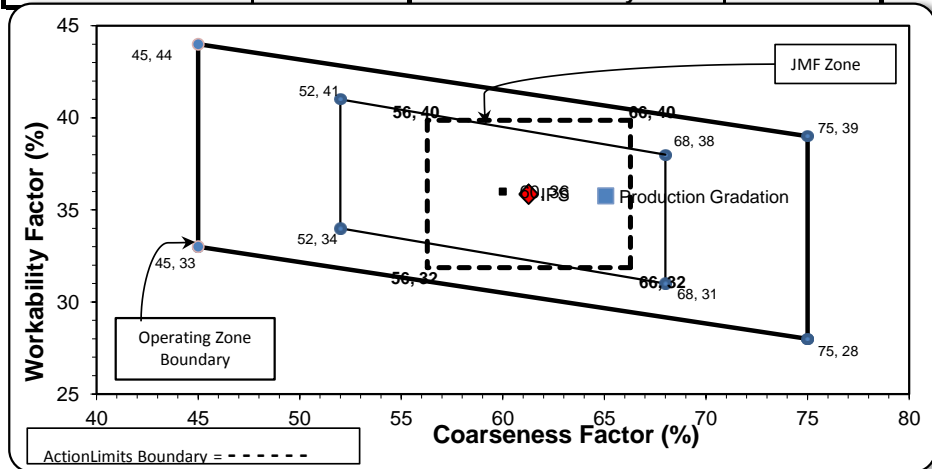
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	99.6	100.0	100.0	99.8	0.2	0.2
3/4"	77.1	100.0	100.0	89.1	10.7	10.9
1/2"	36.8	99.6	100.0	70.0	19.2	30.0
3/8"	16.4	83.8	100.0	58.2	11.8	41.8
#4	2.8	21.2	100.0	43.5	14.7	56.5
#8	1.3	6.5	87.0	35.8	7.8	64.2
#16	0.8	2.8	62.0	25.2	10.6	74.8
#30	0.6	1.8	42.0	17.1	8.1	82.9
#50	0.6	1.6	21.0	8.8	8.3	91.2
#100	0.4	1.5	5.0	2.4	6.4	97.6
LBW	0.7	1.2	0.8	0.8	1.6	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:	65	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: 7/16/18

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 7/17/2018 through 7/23/2018

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1220	7.46	2.62	40.7
26A	71-47	Presque Isle	575	3.52	2.62	19.2
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%



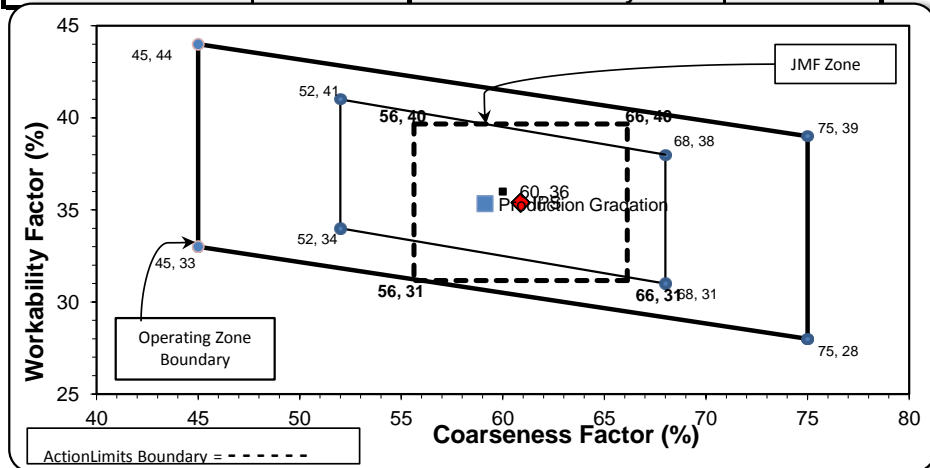
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	84.5	100.0	100.0	93.7	6.3	6.3
1/2"	36.2	95.6	100.0	73.2	20.5	26.8
3/8"	14.1	83.1	100.0	61.8	11.4	38.2
#4	1.9	21.0	97.0	43.7	18.1	56.3
#8	1.3	6.4	83.8	35.3	8.3	64.7
#16	1.2	3.6	69.3	28.9	6.4	71.1
#30	1.2	2.9	52.9	22.2	6.7	77.8
#50	1.1	2.7	26.6	11.6	10.6	88.4
#100	1.1	2.4	4.5	2.7	8.9	97.3
LBW	1.0	2.0	0.2	0.9	1.8	99.1

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

Coarseness Factor:	61		
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"	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: