

Aggregate Optimization Chart

MIX ID'S: DDT0F7ET

Production Gradation Report

PLANT #: **P-102**

Sample Date: 10/15/18

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 10/16/2018 through 10/22/2018

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1500	8.94	2.69	49.3
26A	58-003	Stoneco	345	2.06	2.69	11.3
2NS	38-046	Chelsea	1200	7.26	2.65	39.4
Total Wt			3045	18.25		100.0

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



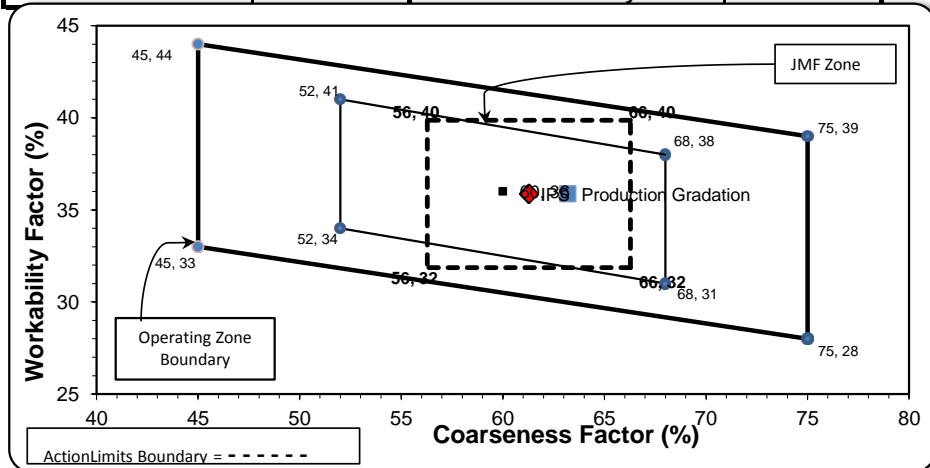
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	99.9	100.0	100.0	100.0	0.0	0.0
3/4"	84.5	100.0	100.0	92.4	7.6	7.6
1/2"	44.9	99.7	100.0	72.8	19.5	27.2
3/8"	20.5	87.9	100.0	59.5	13.4	40.5
#4	3.1	17.7	100.0	42.9	16.5	57.1
#8	1.4	4.4	88.0	35.9	7.1	64.1
#16	1.0	1.9	64.0	25.9	9.9	74.1
#30	0.8	1.4	43.0	17.5	8.4	82.5
#50	0.8	1.2	22.0	9.2	8.3	90.8
#100	0.7	1.2	5.0	2.5	6.7	97.5
LBW	0.8	1.0	0.6	0.7	1.7	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:	63	Workability Factor:	36
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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"	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: 10/15/18

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 10/16/2018 through 10/22/2018

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1495	9.14	2.62	49.9
26A	71-47	Presque Isle	300	1.83	2.62	10.0
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%



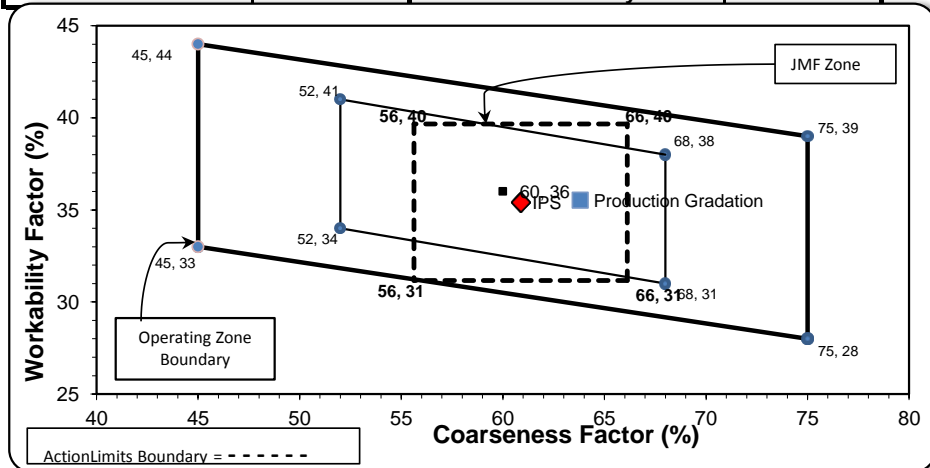
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	99.0	100.0	100.0	99.5	0.5	0.5
3/4"	82.1	100.0	100.0	91.1	8.4	8.9
1/2"	40.7	95.9	100.0	70.0	21.1	30.0
3/8"	21.3	81.4	100.0	58.9	11.1	41.1
#4	3.8	18.3	96.9	42.6	16.3	57.4
#8	2.3	5.9	84.3	35.5	7.0	64.5
#16	2.1	3.6	69.6	29.3	6.2	70.7
#30	2.0	3.0	52.3	22.3	7.0	77.7
#50	1.9	2.7	24.6	11.1	11.2	88.9
#100	1.8	2.5	3.3	2.5	8.6	97.5
LBW	1.4	1.9	0.3	1.0	1.5	99.0

*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: 64 **Workability Factor:** 36



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

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 SM, LLC Technical Service

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