

# Aggregate Optimization Chart

MIX ID'S: DDT0F7ET

Production Gradation Report

**PLANT #:** **P-102**

Sample Date: 7/30/18

Concrete Grade: **TM**

Contractor: \_\_\_\_\_

Dates Test Represents: 7/31/2018 through 8/6/2018

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	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
<b>Total Wt</b>			<b>3045</b>	<b>18.25</b>		<b>100.0</b>

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



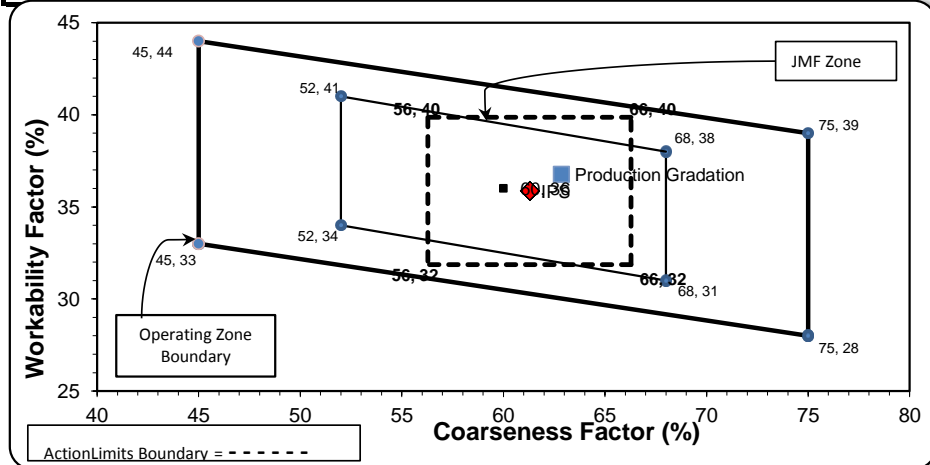
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

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"	99.2	100.0	100.0	99.6	0.4	0.4
3/4"	77.2	100.0	100.0	89.2	10.4	10.8
1/2"	43.0	99.6	100.0	72.9	16.3	27.1
3/8"	19.0	90.0	100.0	60.2	12.7	39.8
#4	3.8	22.8	100.0	44.2	16.0	55.8
#8	1.2	8.5	89.0	36.8	7.4	63.2
#16	0.8	3.9	65.0	26.5	10.3	73.5
#30	0.6	2.5	46.0	18.7	7.8	81.3
#50	0.6	2.2	27.0	11.2	7.5	88.8
#100	0.4	2.0	7.0	3.2	8.0	96.8
LBW	0.5	1.8	1.2	0.9	2.3	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:** **63**      **Workability Factor:** **37**



Initial Production Sample (IPS)

<b>Coarseness Factor:</b> <b>61</b>		<b>Workability Factor:</b> <b>36</b>	
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: 7/30/18

Concrete Grade: **TM**

Contractor: \_\_\_\_\_

Dates Test Represents: 7/31/2018 through 8/6/2018

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1420	8.69	2.62	47.4
26A	71-47	Presque Isle	375	2.29	2.62	12.5
2NS	63-92	AA Grange Hall	1200	7.26	2.65	40.1
<b>Total Wt</b>			<b>2995</b>	<b>18.24</b>		<b>100.0</b>

<----- 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"	91.4	100.0	100.0	95.9	4.1	4.1
1/2"	47.2	96.6	100.0	74.5	21.4	25.5
3/8"	19.4	86.1	100.0	60.0	14.5	40.0
#4	2.0	26.5	97.4	43.3	16.8	56.7
#8	1.3	9.6	84.7	35.8	7.5	64.2
#16	1.2	4.8	69.8	29.1	6.6	70.9
#30	1.1	3.6	52.3	21.9	7.2	78.1
#50	1.1	3.1	24.6	10.8	11.2	89.2
#100	1.0	2.8	3.8	2.3	8.4	97.7
LBW	0.9	2.2	0.3	0.8	1.5	99.2

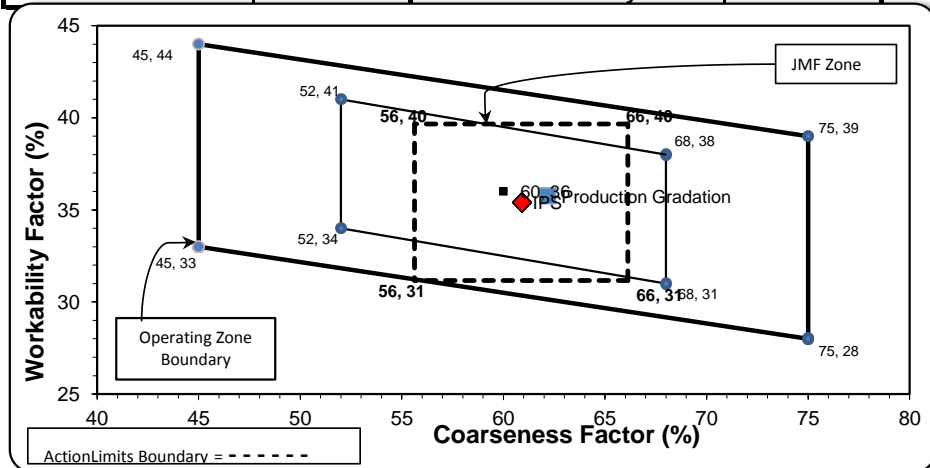
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.



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Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

**Coarseness Factor: 62**      **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

PREPARED BY:  
 SM, LLC Technical Service

Approved By: