

# Aggregate Optimization Chart

MIX ID'S: DDT0F7ET

Production Gradation Report

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

Sample Date: 11/19/18

Concrete Grade: **TM**

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

Dates Test Represents: 11/20/2018 through 11/26/2018

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1400	8.34	2.69	46.0
26A	58-003	Stoneco	445	2.65	2.69	14.6
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%

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"	99.7	100.0	100.0	99.9	0.1	0.1
3/4"	79.8	100.0	100.0	90.7	9.1	9.3
1/2"	37.7	99.6	100.0	71.3	19.4	28.7
3/8"	15.8	85.6	100.0	59.2	12.1	40.8
#4	4.8	22.0	100.0	44.8	14.4	55.2
#8	2.6	5.8	88.0	36.7	8.1	63.3
#16	2.3	2.4	64.0	26.6	10.1	73.4
#30	2.0	1.8	43.0	18.1	8.5	81.9
#50	1.8	1.7	23.0	10.1	8.0	89.9
#100	1.6	1.6	4.0	2.5	7.6	97.5
LBW	1.5	1.4	0.7	1.2	1.4	98.8

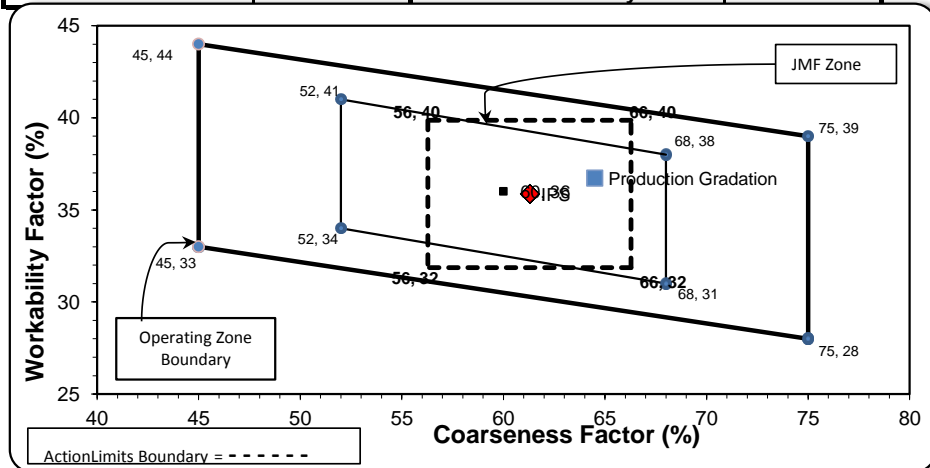
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when a 2"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



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

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

**Coarseness Factor: 65**      **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: DDT0F7ET

Production Gradation Report

**PLANT #:** **P-36**

Sample Date: 11/19/18

Concrete Grade: **TM**

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

Dates Test Represents: 11/20/2018 through 11/26/2018

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1395	8.53	2.62	46.6
26A	71-47	Presque Isle	400	2.45	2.62	13.4
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%



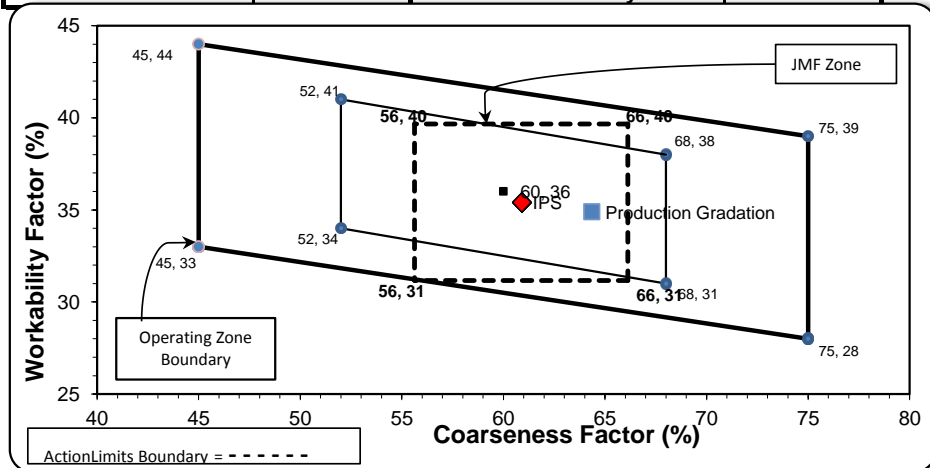
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
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 Farmington Hills, MI 48336

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"	80.6	100.0	100.0	91.0	8.9	9.0
1/2"	34.2	98.6	100.0	69.2	21.8	30.8
3/8"	13.9	86.5	100.0	58.1	11.1	41.9
#4	2.2	14.4	97.4	42.0	16.1	58.0
#8	1.5	3.4	84.2	34.9	7.1	65.1
#16	1.4	2.0	68.1	28.2	6.7	71.8
#30	1.3	1.8	48.2	20.2	8.0	79.8
#50	1.2	1.6	19.7	8.7	11.5	91.3
#100	1.2	1.5	2.8	1.9	6.8	98.1
LBW	0.8	1.1	0.3	0.6	1.2	99.4

\*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

<b>Coarseness Factor:</b>	<b>64</b>	<b>Workability Factor:</b>	<b>35</b>
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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

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