

# Aggregate Optimization Chart

MIX ID'S: DDT0F7ET

Production Gradation Report

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

Sample Date: 8/20/18

Concrete Grade: TM

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

Dates Test Represents: 8/21/2018 through 8/27/2018

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%

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"	81.1	100.0	100.0	91.0	8.8	9.0
1/2"	38.2	99.6	100.0	70.6	20.4	29.4
3/8"	15.4	87.0	100.0	58.1	12.5	41.9
#4	2.5	18.3	100.0	43.0	15.1	57.0
#8	1.1	5.2	90.0	36.7	6.3	63.3
#16	0.9	2.8	65.0	26.4	10.3	73.6
#30	0.8	2.2	45.0	18.4	8.0	81.6
#50	0.7	2.0	25.0	10.4	8.0	89.6
#100	0.7	1.9	6.0	2.9	7.5	97.1
LBW	0.5	1.7	1.5	1.1	1.9	98.9

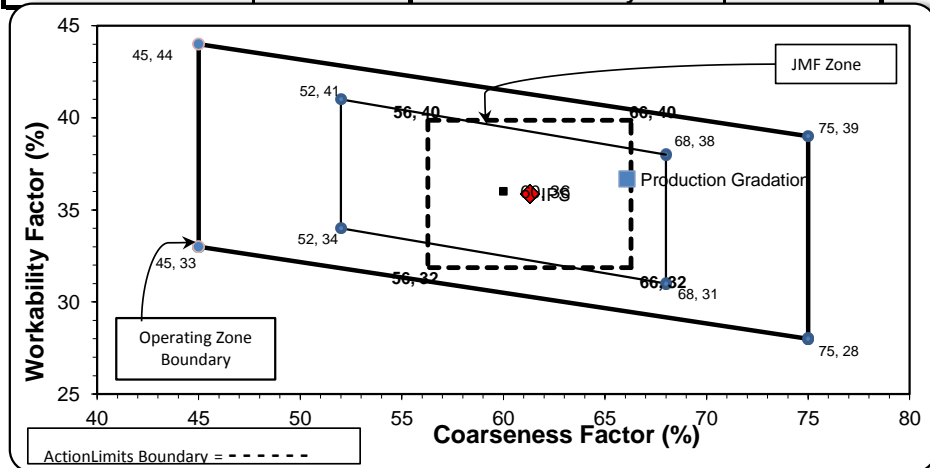


**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

\*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: 66**      **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: 8/20/18

Concrete Grade: TM

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

Dates Test Represents: 8/21/2018 through 8/27/2018

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	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
<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"	82.5	100.0	100.0	90.7	9.3	9.3
1/2"	45.5	96.0	100.0	70.7	20.0	29.3
3/8"	24.4	84.6	100.0	58.7	12.0	41.3
#4	2.5	23.1	96.8	41.7	17.1	58.3
#8	1.4	7.7	82.9	34.5	7.2	65.5
#16	1.2	4.4	67.4	27.9	6.5	72.1
#30	1.2	3.4	49.9	20.9	7.1	79.1
#50	1.1	3.0	24.7	10.7	10.2	89.3
#100	1.1	2.7	4.2	2.4	8.2	97.6
LBW	0.9	1.8	0.4	0.8	1.7	99.2

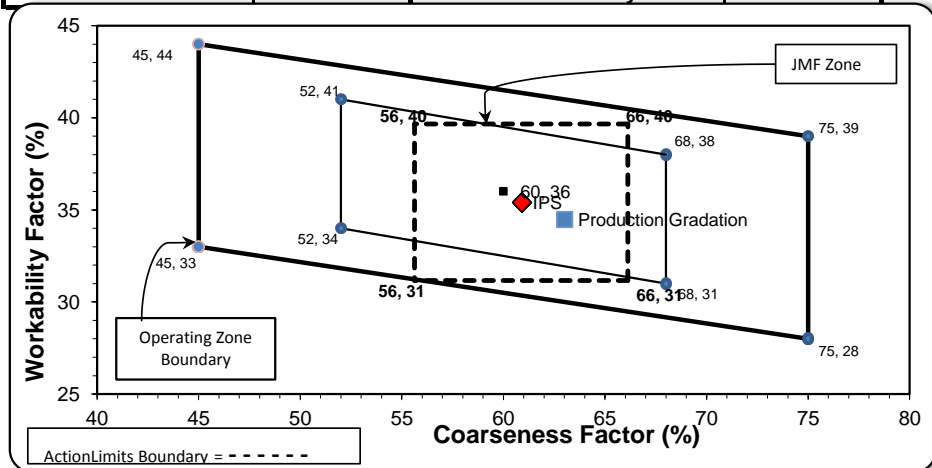


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 \*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>63</b>	<b>Workability Factor:</b>	<b>34</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>61</b>		
<b>Workability Factor:</b>	<b>35</b>		
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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