

Aggregate Optimization Chart

MIX ID'S: DDT0F7ET

Production Gradation Report

PLANT #: **P-102**

Sample Date: 11/26/18

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 11/27/2018 through 12/3/2018

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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
Total Wt			3045	18.25		100.0

<----- 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"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	81.3	100.0	100.0	91.4	8.3	8.6
1/2"	39.0	99.8	100.0	71.9	19.5	28.1
3/8"	17.2	89.7	100.0	60.4	11.5	39.6
#4	3.2	23.8	100.0	44.4	16.1	55.6
#8	2.1	5.9	86.0	35.7	8.6	64.3
#16	2.0	2.5	64.0	26.5	9.2	73.5
#30	1.9	1.9	43.0	18.1	8.4	81.9
#50	1.8	1.7	23.0	10.1	8.0	89.9
#100	1.8	1.6	4.0	2.6	7.5	97.4
LBW	1.4	1.5	0.9	1.2	1.4	98.8

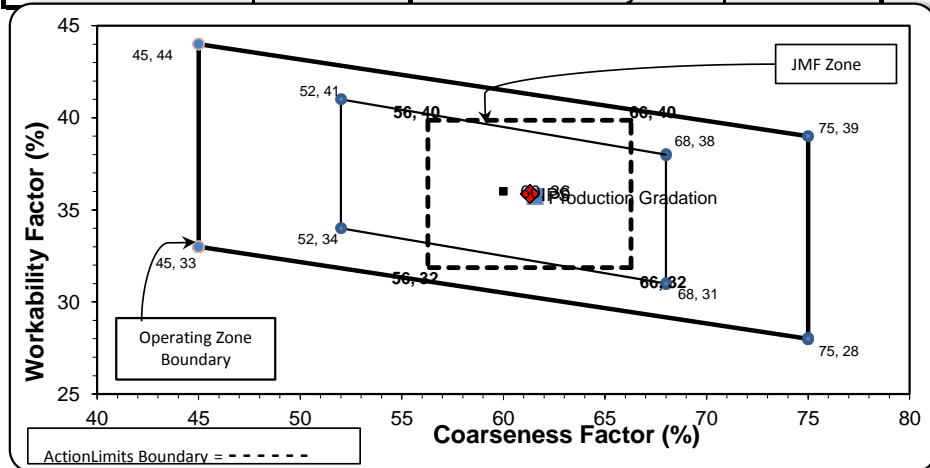


Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

*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:	62	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: 11/26/18

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 11/27/2018 through 12/3/2018

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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
Total Wt			2995	18.24		100.0

<----- 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"	81.6	100.0	100.0	91.4	8.6	8.6
1/2"	39.3	97.0	100.0	71.3	20.1	28.7
3/8"	16.0	84.0	100.0	58.7	12.6	41.3
#4	2.2	10.7	97.4	41.5	17.3	58.5
#8	1.4	1.6	84.0	34.5	7.0	65.5
#16	1.3	0.8	68.0	28.0	6.6	72.0
#30	1.2	0.6	47.5	19.7	8.3	80.3
#50	1.2	0.6	18.3	8.0	11.7	92.0
#100	1.1	0.5	2.4	1.5	6.4	98.5
LBW	0.8	0.3	0.3	0.5	1.0	99.5

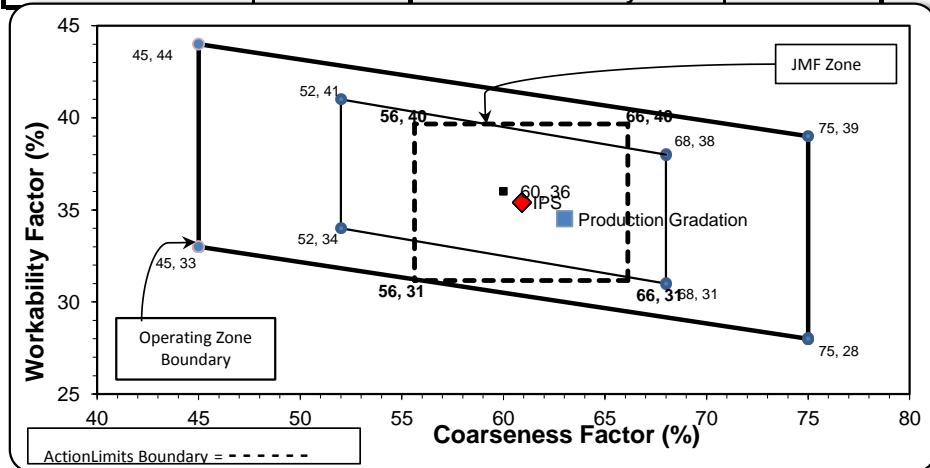


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 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 63 **Workability Factor: 35**



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: