

Aggregate Optimization Chart

MIX ID'S: DDT0F7ET

Production Gradation Report

PLANT #: **P-102**

Sample Date: 8/13/18

Concrete Grade: TM

Contractor: _____

Dates Test Represents: 8/14/2018 through 8/20/2018

MDOT No.: _____

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

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



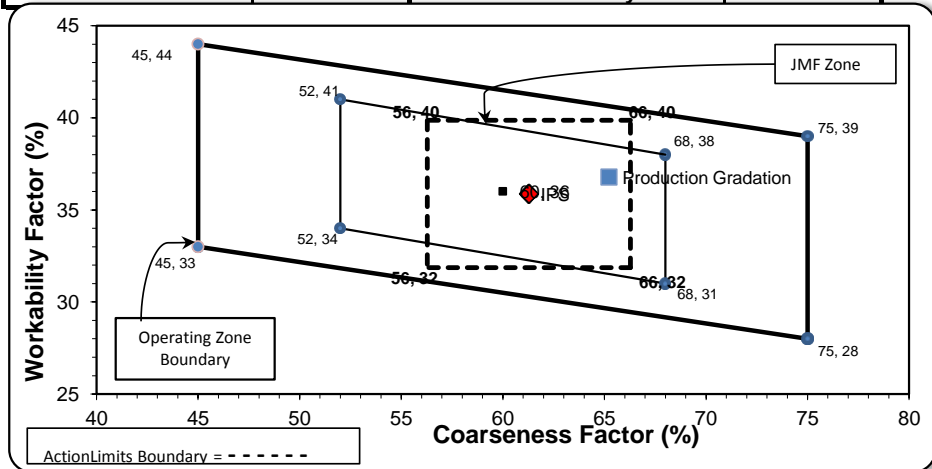
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	82.5	100.0	100.0	91.7	8.0	8.3
1/2"	39.4	100.0	100.0	71.2	20.5	28.8
3/8"	16.9	86.3	100.0	58.8	12.5	41.2
#4	2.4	11.2	100.0	42.0	16.7	58.0
#8	1.1	3.0	91.0	36.8	5.2	63.2
#16	1.1	1.8	65.0	26.4	10.4	73.6
#30	1.0	1.4	44.0	18.0	8.4	82.0
#50	1.0	1.4	23.0	9.7	8.3	90.3
#100	0.9	1.2	5.0	2.6	7.2	97.4
LBW	0.6	1.2	0.9	0.8	1.8	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.

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: 8/13/18

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 8/14/2018 through 8/20/2018

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1695	10.37	2.62	56.6
26A	71-47	Presque Isle	100	0.61	2.62	3.3
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"	85.7	100.0	100.0	91.9	8.1	8.1
1/2"	52.0	95.1	100.0	72.7	19.2	27.3
3/8"	31.0	85.0	100.0	60.4	12.2	39.6
#4	3.3	22.1	97.5	41.7	18.8	58.3
#8	1.6	7.1	84.5	35.0	6.7	65.0
#16	1.3	4.0	68.6	28.4	6.6	71.6
#30	1.3	3.2	48.7	20.4	8.0	79.6
#50	1.2	2.9	21.6	9.4	10.9	90.6
#100	1.2	2.6	2.9	1.9	7.5	98.1
LBW	1.0	1.9	0.3	0.7	1.2	99.3

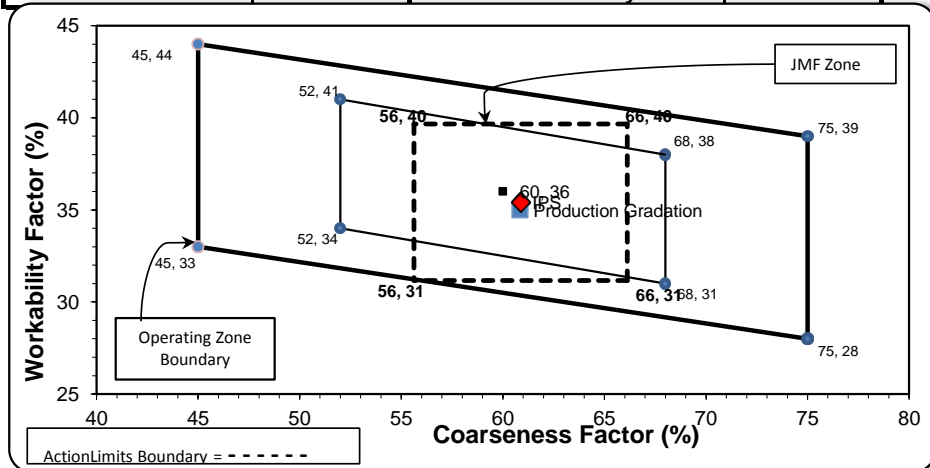
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 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when a 2" max. size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



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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **61** 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

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