



CONCRETE MIX DESIGN

DarCole Products, Inc.
 1940 US 41 South
 Sebree, KY 42455
 USA (270) 826-6499

Customer:	Fc Mix
Description:	100PSI Flowable Fill

Mix Code:	UTFCM125FF11920
Date:	11/9/2020

Air Range:	Minimum	15.0%
	Maximum	20.0%
Slump Range:	Minimum	8"
	Maximum	12"
Aggregate Ratio:	Coarse	0%
	Fine	100%

Compressive Strength:	100 PSI
Mortar Content %:	91.4%
Paste Content %:	38.3%
Mix Suitability Factor:	36.31
Unit Weight:	116.6
Water/Cement ratio:	2.40

Material Description	Specification	Quantity (lbs)	Density	Volume
Cementious				
Cement	Holcim 1P Blend	125	3.000	0.67
<i>Low Speed Cement</i>				
Coarse Aggregates				
Fine Aggregates				
Fine Aggregate 1	Kilgore 22-09514 Washed Concrete Sand	2722	2.618	16.66
<i>55% - Coarse Side = 1497#</i>				
<i>45% - Fine Side = 1225#</i>				
	Water: 36.0 gallons	300	1.000	4.81
	Air Content 18.0%			4.86
Total:		3147		27.00

Admixture(s)	Material Description	Specification	OZ/CWT	Density	OZ/YD
DSA 110	DarCole Synthetic Air 110	AASHTO M-154	5	1.000	6.25
DNL 785	DarCole Products DarNlok 785	AASHTO M-194 Type A	70	1.030	87.50

Reported by:	Ryan Risley-DarCole Products Inc.	Approval by:	
Date:	11/9/2020	Date:	

Disclaimer: The information in this chart is to the best of our knowledge, reliable. Users should make their own tests to determine the suitability of these for their own particular purposes. DarCole Products, Inc. makes no warranty of any kind, express or implied, including those of merchantable and fitness for purpose.



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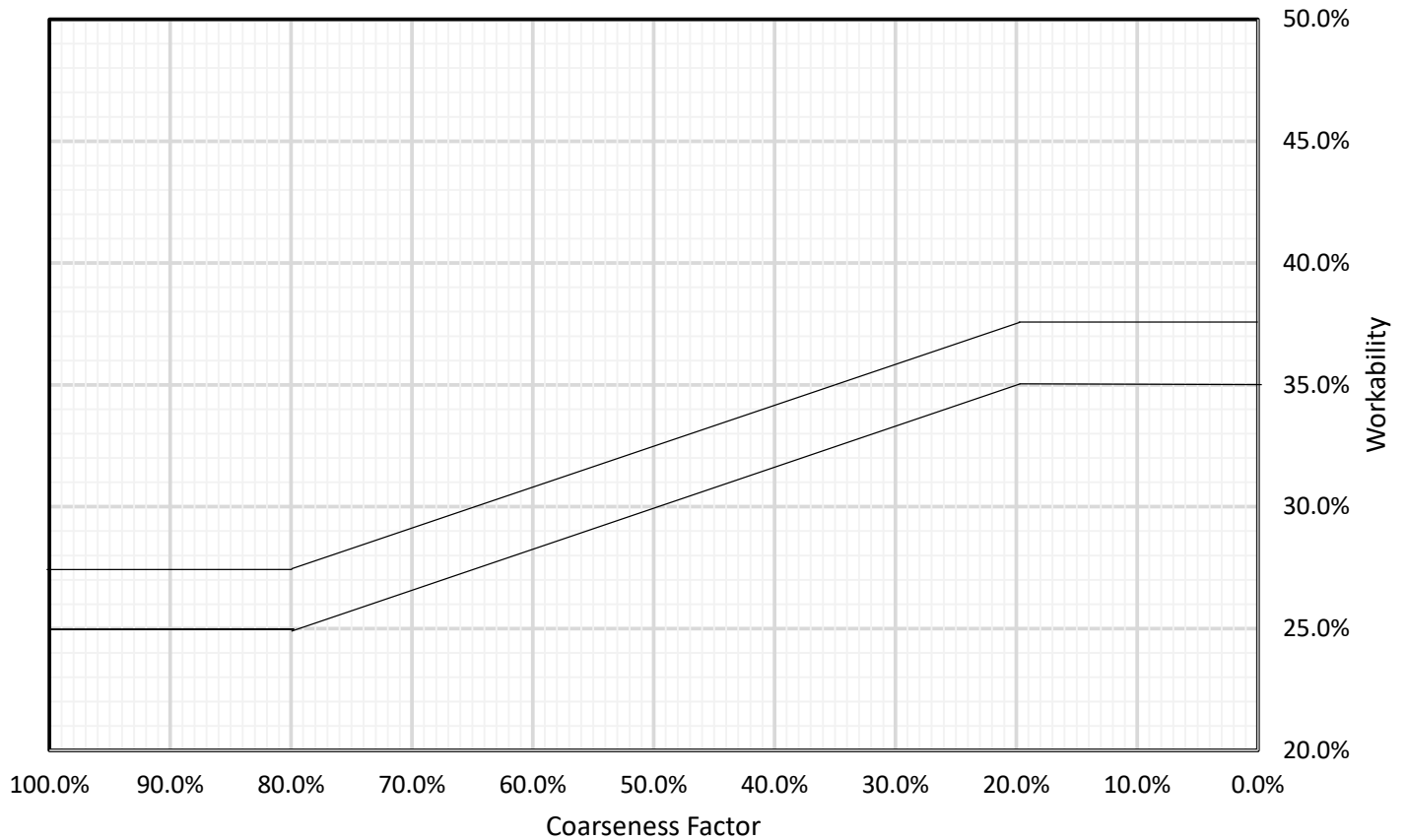
Customer:	Fc Mix	Mix Code:	UTFCM125FF11920
Description:	100PSI Flowable Fill	Date:	11/9/2020

Mix Analysis

91.4% % Mortar		Paste & Mortar						
0.0% % Ag Retained on 3/8 Sieve			Vol	%Total	% Agg	%Mortar	%Paste	
14.0% % Ag Passing 3/8 but Retained on #8 Sieve		+3/8	0.00	0.0%	0.0%			
0.0% Coarseness Factor		3/8-#8	2.33	8.6%	14.0%			
86.0% Workability (Paste + Ag < #8 Sieve)		+#8	2.33	8.6%	14.0%			
74.3% Cement Factor Adjusted Workability		-#8	14.33	53.1%	86.0%	58.1%		
41.52 Modified Specific Surface		Mortar	24.66	91.4%				
36.31 Mix Suitability Factor		Paste	10.34	38.3%		41.9%		
Mix Suitability Factor Guidelines		Slump Range	Powder	0.67	2.5%		2.7%	6.5%
16-20	Unstable, too Harsh	0	Air	4.86	18.0%		19.7%	47.0%
20-22	Harsh Mixes-Heavy Vibration	0-2	Water	4.81	17.8%		19.5%	46.5%
22-25	Hard Wearing-Slabs, Precast	2-3.5	TOTAL	27.00	100.0%	100.0%	100.0%	100.0%
25-27	Structural Concrete	3-4	Calculated for Total					
26-28	Good Pumpable Concrete=Good Surface	4-5						
27-31	Pumpable, Lightweight, Flowing	>8						

Coarseness Factor Chart

● Workability (Paste + Ag < #8 Sieve) × Cement Factor Adjusted Workability





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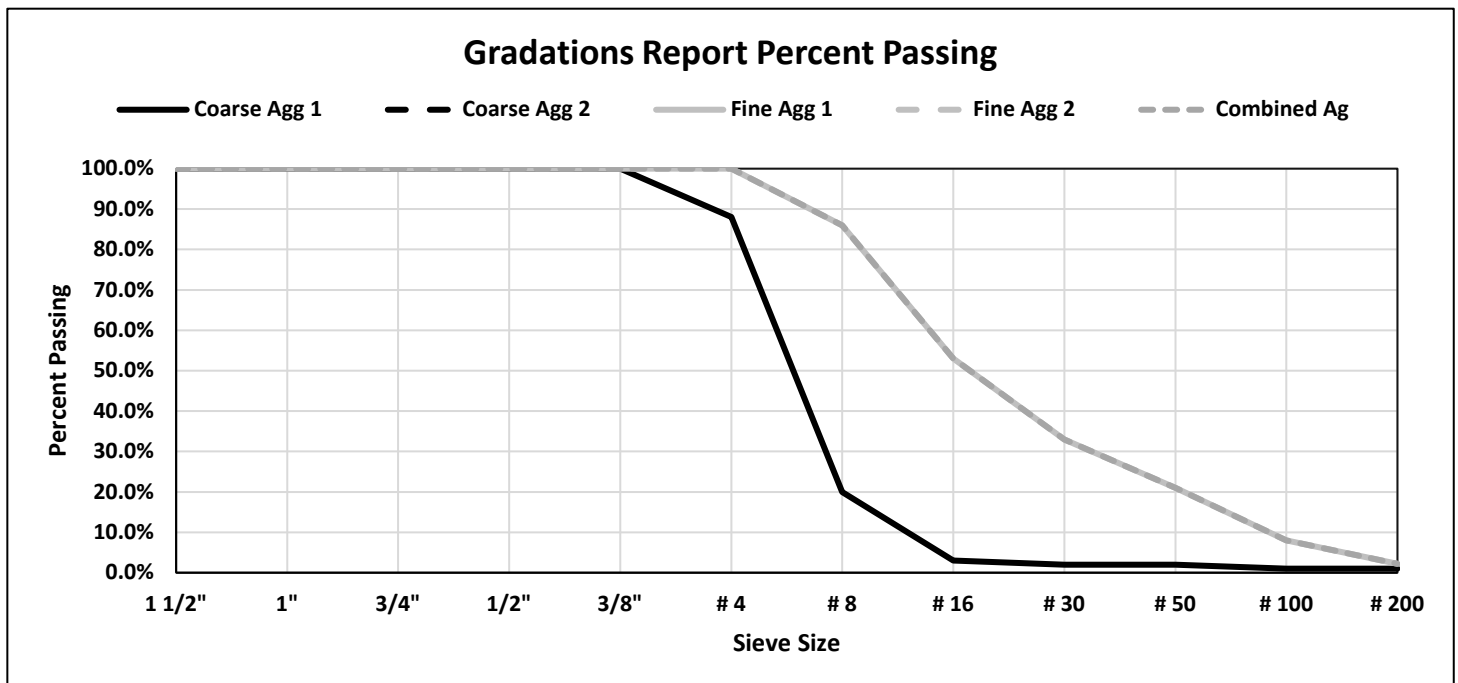
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Aggregate Sieve Analysis												
Sieve	Coarse Agg 1		Coarse Agg 2		Fine Agg 1		Fine Agg 2		Combined Ag		Paste+Agg	
1 1/2"	100.0%	0.0%			100.0%	0.0%			100.0%	0.0%	100.0%	0.0%
1"	100.0%	0.0%			100.0%	0.0%			100.0%	0.0%	100.0%	0.0%
3/4"	100.0%	0.0%			100.0%	0.0%			100.0%	0.0%	100.0%	0.0%
1/2"	100.0%	0.0%			100.0%	0.0%			100.0%	0.0%	100.0%	0.0%
3/8"	100.0%	0.0%			100.0%	0.0%			100.0%	0.0%	100.0%	0.0%
# 4	88.0%	12.0%			100.0%	0.0%			100.0%	0.0%	100.0%	0.0%
# 8	20.0%	80.0%			86.0%	14.0%			86.0%	14.0%	91.4%	8.6%
# 16	3.0%	97.0%			53.0%	47.0%			53.0%	47.0%	71.0%	29.0%
# 30	2.0%	98.0%			33.0%	67.0%			33.0%	67.0%	58.6%	41.4%
# 50	2.0%	98.0%			21.0%	79.0%			21.0%	79.0%	51.2%	48.8%
# 100	1.0%	99.0%			8.0%	92.0%			8.0%	92.0%	43.2%	56.8%
# 200	1.0%	99.0%			2.2%	97.8%			2.2%	97.8%	26.8%	73.2%
# 325	0.0%	100.0%			0.0%	100.0%			0.0%	100.0%		
% Agg					100.0%							

Percent Passing
Percent Retained

	Fine Agg 1	Fine Agg 2
F.M.	2.99	
F.M. Guidelines		
	Fine Sand	2.2-2.6
	Medium Sand	2.6-2.9
	Coarse Sand	2.9-3.2

Coarse Aggregate 1
 Coarse Aggregate 2
 Fine Aggregate 1 Kilgore 22-09514 Washed Concrete Sand
 Fine Aggregate 2





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Individual Percent Retained						
Sieve	Coarse Agg 1	Coarse Agg 2	Fine Agg 1	Fine Agg 2	Combined Ag	Paste + Ag
1 1/2"	0.0%		0.0%		0.0%	0.0%
1"	0.0%		0.0%		0.0%	0.0%
3/4"	0.0%		0.0%		0.0%	0.0%
1/2"	0.0%		0.0%		0.0%	0.0%
3/8"	0.0%		0.0%		0.0%	0.0%
# 4	12.0%		0.0%		0.0%	0.0%
# 8	68.0%		14.0%		14.0%	8.6%
# 16	17.0%		33.0%		33.0%	20.4%
# 30	1.0%		20.0%		20.0%	12.3%
# 50	0.0%		12.0%		12.0%	7.4%
# 100	1.0%		13.0%		13.0%	8.0%
# 200	0.0%		5.8%		5.8%	16.4%
% Agg			100.0%			

Coarse Aggregate 1

0

Coarse Aggregate 2

Fine Aggregate 1

Kilgore 22-09514 Washed Concrete Sand

Fine Aggregate 2

