Post Office Box 830: Leander, Texas 78646
Main Office: 512-759-1438 Fax: 512-759-2160

05/12/2023

SUBMITTAL: GEORGES RANCH

PROJECT: GEORGES RANCH

ADDRESS: CHAPMAN RD AND HWY 46 BOERNE

CUSTOMER: V.K. KNOWLTON CONSTRUCTION

Dear **CASEY,**
We propose the following mix designs for the above referenced project:

Mix	Use	Slump	Air	W/CM	Specified Strength
1051150 0.50 w/c, 517 cm, 15% ash	PER PLANS	4-6\5	0-3\2	0.5	4000 psi @ 28 Days
DOTC TXDOT CLASS C	CLASS C	3-5\4	0-3\1.5	0.45	3600 psi @ 28 Days
1042200 3000 PSI, 20% ash	PER PLANS	4-6\5	0-3\2	0.61	3000 psi @ 28 Days
0447201C 470 lbs cm, 25% ash, 3/8 crushed	CURB	4-6\5	3-6\4.5	0.53	3000 psi @ 28 Days
1037150 2500 PSI	PER PLANS	4-6\5	0-3\2	0.69	2500 psi @ 28 Days
7547251 5sk grout	GROUT	3-5\4	3-6\4.5	0.59	

All materials and concrete delivered to this project conform to ASTM C-94, ACI 301 and ACI 318 Specifications for Ready Mixed Concrete. Tex-Mix Concrete will not be responsible for concrete compromised by the addition of water, improper placing, finishing or curing techniques.

Please call Dispatch - **North - (512) 759-1007**, **South (San Antonio, San Marcos, New Braunfels) - (210) 801-9425, Spicewood - (830) 693-4555** to order concrete. You must order using the designated ***Mix Code(s)*** and ***Project Name*** to ensure delivery of correct mix design to the correct project.

PLEASE NOTIFY THIS OFFICE AS TO THE ACCEPTANCE OR REJECTION OF THESE MIX DESIGNS. LACK OF RESPONSE PRIOR TO FIRST POUR SHALL RESULT IN ACCEPTANCE.

NOTE: EVALUATION OF THIS CONCRETE MUST BE CONDUCTED ACCORDING TO ASTM AND ACI STANDARDS. PLEASE ENSURE ALL TEST RECORDS ARE SENT TO TEX-MIX CONCRETE IN A TIMELY MANNER PER ASTM C 94. Send to reports@tex-mixconcrete.com

Thank-you for giving us this opportunity to be of service to you, feel free to contact me if you should need any further assistance.

Additional Notes and Comments

1. The submitted mixes have been proportioned in accordance with the applicable portions of ACI 211 and your request.

2. Based on current market conditions, Tex-Mix Concrete cannot guarantee a single source of cement, fly ash, or aggregates for any project except by a written advance arrangement.

3. Aggregate weights may change depending on gradations or specific gravity of material.

4. Tex-Mix Concrete does not guarantee the color uniformity of ready mix concrete due to: normal color variation in cement and aggregates, normal slump variation, or other conditions such as weather, placement, consolidation, curing, leakage or variations in form texture, or surface treatments. The aggregates native to this region may also contain trace amounts of iron (marcasite, pyrite, etc.) while not visible to the naked eye, may become noticeable in the concrete through oxidation.

5. If the submitted mix designs contain a high volume of fly ash (40% or more), please note that the contractor and testing laboratory are responsible for a proper initial curing environment for the specimens and the cylinders should NOT be transported to the laboratory prior to 48hours after casting.

6. Allowable water that may be added to the concrete is identified on the delivery ticket. This will indicate the water with-held from the batch. Water added in excess of this amount will reduce the concrete strength and will be at the customer's risk.

7. Tex-Mix Concrete cannot control, and is therefore not responsible for excessive loss of entrained air content due to pump configuration or discharge from the hose. To ensure minimum air loss when pumping, maintain a continuous flow of concrete through the entire length of pipe and do not subject the concrete to free fall.

8. We do not guarantee air content. We will not allow concrete to be rejected due to low air content. We must be notified if a low or high air content appears so appropriate field adjustments can be considered for implementation.

9. Tex-Mix Concrete only guarantees slump at the initial point of discharge (truck chute) and is not responsible for slump loss due to pumping.

10. Tex-Mix Concrete does not guarantee that concrete mixes will pump, unless specifically stated in the mix design. Specifically designed pump mixes will be proportioned in accordance with ACI 304.2R, latest edition.

11. In order to comply with ACI 318 and ASTM C-94 section 4.6 Tex-Mix Concrete must be included on the distribution list for all concrete test reports. Use of these mixes constitutes release of these test reports to Tex-Mix Concrete. Please send to reports@tex-mixconcrete.com

12. These mix designs may be considered "Potential High-Early Strength". Test specimens used for

inplace early strength determination should be cured in a manner as close as possible to the in-place concrete. We suggest a maturity monitoring system for the most accurate estimation of in-place strength instead of cylinders. Cylinders for 28 or 56 day acceptance strength should be cured in strict accordance with ASTM C31. TEX-MIX CONCRETE CANNOT BE HELD RESPONSIBLE FOR LOW STRENGTHS ASSOCIATED WITH IMPROPER TESTING AND CURING.

13. Concrete compressive strengths of 6000psi and greater are considered “high strength”. Temperature control should be used to maintain concrete temperatures at or below 90 degrees F. The contractor and commercial testing laboratory are responsible for proper initial curing environment for the specimens between 68-78 F°. Failure to cure in accordance with ASTM C31 will result in loss of strength guarantee. Additionally, ACI 363.2R, “Guide to Quality Control and Testing of High-Strength Concrete” should be consulted prior to first pour.

14. The minimum load size for concrete containing pigments and/or ASTM C494 Type F admixture (HRWR) as constituent components is 4 cubic yards.

15. The addition of any additives not supplied by Tex-Mix Concrete, including but not limited to pigments, fibers, water proofers, and/or water repellent admixtures, foaming agents, and others voids the warranty of the performance of the concrete. The concrete must be tested before the addition of any additives for the strength guarantee to be valid. The Contractor is responsible for determining such effects additives have on fresh and hardened concrete.

Range of ambient temperature and humidity for which the design is valid.

1. The minimum ambient temperature should be 40 degrees Fahrenheit and rising to a maximum of 100 degrees Fahrenheit and declining. 2. No concrete should be placed in the rain or with a severe threat of rain. 3. Set accelerators, set retarders, and temperature control (ice, liquid nitrogen, etc.) should be considered at either temperature extremes. 4. ACI 305 - Hot Weather Concreting and ACI 306 - Cold Weather Concreting should be referenced for more information and guidance.

Maximum elapsed time before discharge after introduction of water and cement.

1. No set retarding admixture: a. 50 - 75 degree Fahrenheit concrete temperature - 90 minutes b. 76 - 90 degree Fahrenheit concrete temperature - 75 minutes c. 91 - 100 degree Fahrenheit concrete temperature - 60 minutes

2. With set retarding admixture: a. 50 - 75 degree Fahrenheit concrete temperature - 120 minutes b. 76 - 90 degree Fahrenheit concrete temperature - 105 minutes c. 91 - 100 degree Fahrenheit concrete temperature - 90 minutes

Maximum and minimum permissible concrete temperatures at time of placement.

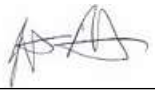
1. Minimum Concrete Temperature: 50 degrees Fahrenheit 2. Maximum Concrete Temperature: 100 Degrees Fahrenheit.

Special requirements for pumping.

1. No more than three (3) rubber hose sections should be used at any time for placement of the concrete, Concrete should be pumped using only steel line with a minimum diameter of three (3) to four (4) times the “nominal size” aggregate being pumped. Nominal size is defined as: a. The largest required sieve in the specification (ASTM C33) thru which 100 percent of the sample is required to pass. b. At no time should the line be reduced to less than four (4) inches for 3/4” aggregate and less than five (5) inches for 1” aggregate. 2. Concrete should be sampled and tested for slump at the point of delivery (chute) and at the point of final discharge (end of hose) to perform comparative testing to determine and significant

changes in slump.

Sincerely,



Name/Title Justin Dickey / Technical Services Manager

Concrete Mix Submittal

Submittal Information

Submittal Name	GEORGES RANCH
Date Submitted	05/12/2023
Customer	V.K. KNOWLTON CONSTRUC
Project Name	GEORGES RANCH
Use	PER PLANS

Mix Information

Mix ID	1051150
Mix Name	0.50 w/c, 517 cm, 15% ash
Compressive Strength (f'c)	4000 psi @ 28 Days
Air Entrained	No

Mix Properties

Slump	4-6\5	**Sack Content**	5.50 94 lb/sack	**Total Mass**	4149 lb
Air	0-3\2	**Total Water**	31.05 gal	**Total Volume**	27.00 ft3
W/CM Ratio	0.5	**Water/Sack**	5.65 gal	**Unit Weight**	153.68 lb/ft3

Group	Material Description	Supplier	Absorption	Specific Gravity	Mass	Volume
Cement	CEMENT	Capitol Aggregates		3.15	439	2.233
Additive	FLY ASH - F	Integrated Materials		2	78	0.625
Aggregate	LIMESTONE ROCK	Johnson City Crushed Stone		2.79	1900	10.914
	MANUFACTURED SAND	Johnson City Crushed Stone		2.79	1228	7.053
	SILICA SAND	Volner		2.65	246	1.485
Water	WATER			1	259	4.151
Admixture	X-15 Range: 2-12 fl oz/100 lb CM	Euclid Chemical		1		
Air	Air					0.540

Mix Notes

Tex-Mix Concrete has no knowledge or authority regarding where this mix is to be placed therefore it is the responsibility of the project architect/engineer, and or contractor to ensure that the above designed mix parameters of compressive strength, water cement ratio, binder content, and air content, are appropriate for the anticipated environmental conditions (ie. ACI-318 chapter 4, and local building codes).

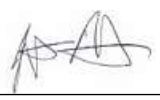
Tex-Mix Concrete guarantees the submitted mix design will achieve the required minimum specified compressive strength if the test specimens are made, cured, and tested in strict accordance with all applicable standards by a certified technician.

Chemical admixtures are dosed in accordance with the manufacturers recommendations and may be adjusted to compensate for ambient conditions.

Submittal Notes

Contact Justin Dickey
Phone 512-759-1438
Email justin.dickey@tex-mixconcrete.com

Sincerely,



Name/Title Justin Dickey / Technical Services Manager

TEXMIX

Concrete Mix Evaluation Report

ACI 318 Required Average Strength

Mix ID	1051150	Number Of Tests	34
		Average Strength	4746 psi
Design Strength (f'c)	4000 psi @ 28 Days	St Dev	529 psi
Required Strength (f'cr)	4370 psi @ 28 Days	St Dev (Modified)	278 psi

Test Date	Temp (Concrete) (°F)	Slump (in)	Comp Strength (3-Day) (psi)	Comp Strength (7-Day) (psi)	Acceptance Strength (28-Day) (psi)	Moving Average (psi)
12/28/2022	67	5.5	3050	4040	5100	
12/28/2022	68	5.25	3390	4370	5310	
12/28/2022	60	5.25	3150	4320	5430	5280
12/28/2022	61	5	3220	4340	5060	5267
12/28/2022	58	5	2950	3940	5480	5323
12/30/2022	64	6.75	2130	2890	4090	4877
12/30/2022	65	5.5	1860	2720	4050	4540
01/03/2023	74	7	3150	3780	5340	4493
01/06/2023	75	5	4120	4480	5440	4943
01/06/2023	76	5	4030	4390	5380	5387
01/06/2023	75	5.5	3090	4110	5320	5380
01/08/2023	75	4	2510	3260	4080	4927
01/09/2023	75	5	2510	3140	4410	4603
01/09/2023	76	5	2430	3260	4090	4193
01/09/2023	68	5	2920	3620	4290	4263
01/09/2023	68	5	2850	3600	4490	4290
01/09/2023	67	5	2990	3720	4540	4440
01/09/2023	69	5	2700	3270	4170	4400
01/09/2023	68	5	2620	3300	4470	4393
01/11/2023	71	4.5	2560	3160	4040	4227
01/11/2023	69	6	2650	3250	4240	4250
01/13/2023	60	7	1600	2600	4000	4093
01/18/2023	63	5.5		3650	5190	4477
01/18/2023	67	6.25		3760	4930	4707
01/19/2023	67	7		2900	4190	4770
01/19/2023	67	7		3060	4410	4510
01/24/2023	60	5.25	3080	4380	5490	4697
01/27/2023	65	6.75	3560	4160	5210	5037
01/27/2023	65	6	3510	4040	5340	5347
03/11/2023	50	8		3460	4680	5077
03/11/2023	57	7		3270	4800	4940
03/24/2023	67	8		3780	4300	4593
03/31/2023	67	6.5		4160	5200	4767
03/31/2023	70	4.25		3690	4820	4773

Boerne

Concrete Mix Submittal

Submittal Information

Submittal Name	GEORGES RANCH
Date Submitted	05/12/2023
Customer	V.K. KNOWLTON CONSTRUC
Project Name	GEORGES RANCH
Use	CLASS C

Mix Information

Mix ID	DOTC
Mix Name	TXDOT CLASS C
Compressive Strength (f'c)	3600 psi @ 28 Days
Air Entrained	No

Mix Properties

Slump	3-5\4	**Sack Content**	6.06 94 lb/sack	**Total Mass**	4225 lb
Air	0-3\1.5	**Total Water**	30.57 gal	**Total Volume**	27.00 ft3
W/CM Ratio	0.45	**Water/Sack**	5.04 gal	**Unit Weight**	156.50 lb/ft3

Group	Material Description	Supplier	Absorption	Specific Gravity	Mass	Volume
Cement	CEMENT	Capitol Aggregates		3.15	570	2.900
Aggregate	LIMESTONE ROCK	Johnson City Crushed Stone		2.79	1900	10.914
	MANUFACTURED SAND	Johnson City Crushed Stone		2.79	1250	7.180
	SILICA SAND	Volner		2.65	250	1.512
Water	WATER			1	255	4.087
Admixture	X-15 Range: 2-12 fl oz/100 lb CM	Euclid Chemical		1		
Air	Air					0.405

Mix Notes

Tex-Mix Concrete has no knowledge or authority regarding where this mix is to be placed therefore it is the responsibility of the project architect/engineer, and or contractor to ensure that the above designed mix parameters of compressive strength, water cement ratio, binder content, and air content, are appropriate for the anticipated environmental conditions (ie. ACI-318 chapter 4, and local building codes).

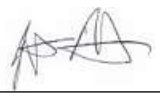
Tex-Mix Concrete guarantees the submitted mix design will achieve the required minimum specified compressive strength if the test specimens are made, cured, and tested in strict accordance with all applicable standards by a certified technician.

Chemical admixtures are dosed in accordance with the manufacturers recommendations and may be adjusted to compensate for ambient conditions.

Submittal Notes

Contact Justin Dickey
Phone 512-759-1438
Email justin.dickey@tex-mixconcrete.com

Sincerely,



Name/Title Justin Dickey / Technical Services Manager

LABORATORY TEST REPORT

Compressive Strength Test

Raba Kistner Consultants Inc.
211 Trade Center, Suite 300
New Braunfels, Texas 78130
(830) 214-0544 ● FAX(830) 214-0627
www.rkci.com
TBPE Firm F-3257

ATTN.: JUSTIN DICKEY
TO: **TEX-MIX CONCRETE**
PO BOX 830
LEANDER, TEXAS 78646

PROJECT NO.: AND19-023-00
CAST DATE: 04/07/2021
ASSIGNMENT NO.: N21-010961
REPORT VERSION: A
SHEET NUMBER: 3 of 4
TECHNICIAN: CLIENT

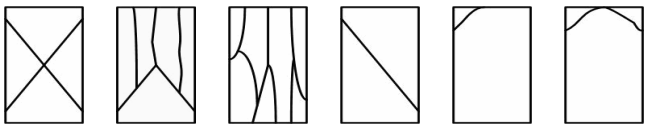
PROJECT: Tex-Mix Concrete
PLACEMENT LOCATION: Client Drop Off
SAMPLE LOCATION:Boerne Plant Truck # 1904

SET INDEX:	DOTC23				
SUPPLIER:	TexMix	BATCH TIME:	8:33	AIR CONTENT (%):	1.5
TRUCK NO:	1904	SAMPLE TIME:	8:33	UNIT WEIGHT (pcf):	145.18
TICKET NO:	2302184	SAMPLE TEMP. (ºF):	74	FIELD CURED (day):	1
SAMPLED AT (cu yds):	NP	AMBIENT TEMP. (ºF):	70	SAMPLE TYPE:	Concrete Cylinder
DESIGN STR.(psi):	3,600	SLUMP (in.):	6.50	SAMPLE SIZE(in.):	4 x 8
PRODUCT NO.:	DOTC23	CLASS:		WATER ADDED:	

SPECIMEN NUMBER	DATE OF TEST	AGE (days)	LOAD (lbs)	DIAMETER (in)	AREA (in.²)	STRENGTH (psi)	PERCENT OF DESIGN	FRACTURE TYPE	TESTED BY
13	04/14/2021	7	57,040	4.00	12.57	4,540	126	Type 4	SCOTT CECIL
14	04/14/2021	7	58,280	4.00	12.57	4,640	129	Type 4	SCOTT CECIL
15	04/21/2021	14	63,160	4.00	12.57	5,020	139	Type 4	SCOTT CECIL
16	04/21/2021	14	62,450	4.00	12.57	4,970	138	Type 5	SCOTT CECIL
17	05/05/2021	28	67,970	4.00	12.57	5,410	150	Type 4	SCOTT CECIL
18	05/05/2021	28	68,590	4.00	12.57	5,460	152	Type 5	SCOTT CECIL

NOTE: Some information on this test report provided by others. Testing and reporting was conducted in general accordance with the following applicable A.S.T.M. references: C31,C143,C172,C1064,C1231, unless otherwise noted.

TYPES OF FRACTURE



Type 1 Type 2 Type 3 Type 4 Type 5 Type 6

*** - Indicates noncompliance with specifications.**
REMARKS: Client provided samples for testing.

COPIES TO: Above (1) (email report)
Tex-Mix Concrete(1)

RABA KISTNER CONSULTANTS, INC.

BY: _____
05/10/2021

TEX MIX

Boerne

Concrete Mix Submittal

Submittal Information

Submittal Name	GEORGES RANCH
Date Submitted	05/12/2023
Customer	V.K. KNOWLTON CONSTRUC
Project Name	GEORGES RANCH
Use	PER PLANS

Mix Information

Mix ID	1042200
Mix Name	3000 PSI, 20% ash
Compressive Strength (f'c)	3000 psi @ 28 Days
Air Entrained	No

Mix Properties

Slump	4-6\5	**Sack Content**	4.50 94 lb/sack	**Total Mass**	4147 lb
Air	0-3\2	**Total Water**	31.05 gal	**Total Volume**	27.00 ft3
W/CM Ratio	0.61	**Water/Sack**	6.90 gal	**Unit Weight**	153.60 lb/ft3

Group	Material Description	Supplier	Absorption	Specific Gravity	Mass	Volume
Cement	CEMENT	Capitol Aggregates		3.15	360	1.832
Additive	FLY ASH - F	Integrated Materials		2	63	0.505
Aggregate	LIMESTONE ROCK	Johnson City Crushed Stone		2.79	1888	10.845
	MANUFACTURED SAND	Johnson City Crushed Stone		2.79	1347	7.737
	SILICA SAND	Volner		2.65	230	1.391
Water	WATER			1	259	4.151
Admixture	X-15 Range: 2-12 fl oz/100 lb CM	Euclid Chemical		1		
Air	Air					0.540

Mix Notes

Tex-Mix Concrete has no knowledge or authority regarding where this mix is to be placed therefore it is the responsibility of the project architect/engineer, and or contractor to ensure that the above designed mix parameters of compressive strength, water cement ratio, binder content, and air content, are appropriate for the anticipated environmental conditions (ie. ACI-318 chapter 4, and local building codes).

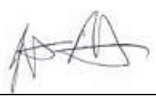
Tex-Mix Concrete guarantees the submitted mix design will achieve the required minimum specified compressive strength if the test specimens are made, cured, and tested in strict accordance with all applicable standards by a certified technician.

Chemical admixtures are dosed in accordance with the manufacturers recommendations and may be adjusted to compensate for ambient conditions.

Submittal Notes

Contact Justin Dickey
Phone 512-759-1438
Email justin.dickey@tex-mixconcrete.com

Sincerely,



Name/Title Justin Dickey / Technical Services Manager

TEXMIX

Concrete Mix Evaluation Report

ACI 318 Required Average Strength

Mix ID 1042200

Design Strength (f'c) 3000 psi @ 28 Days

Required Strength (f'cr) 3380 psi @ 28 Days

Number Of Tests 34

Average Strength 3791 psi

St Dev 410 psi

St Dev (Modified) 287 psi

Test Date	Temp (Concrete) (°F)	Slump (in)	Comp Strength (7-Day) (psi)	Acceptance Strength (28-Day) (psi)	Moving Average (psi)
01/12/2022	74	7	2280	3780	
01/13/2022	79	6.5	1990	4270	
01/14/2022	74	4.5	2430	4480	4177
01/17/2022	67	7.75	3110	3830	4193
01/17/2022	64	8	2620	3810	4040
01/17/2022	67	8	2680	3790	3810
01/17/2022	65	7	2650	4260	3953
01/17/2022	68	6.5	2680	4000	4017
01/17/2022	66	7	2820	4250	4170
01/19/2022	64	4.5	2470	3040	3763
01/19/2022	52	7.25	2470	3320	3537
01/19/2022	65	4.75	2830	4060	3473
01/19/2022	63	5	2420	3830	3737
01/19/2022	67	7	2350	3410	3767
01/19/2022	74	5.5	3170	4050	3763
01/20/2022	70	7.25	2210	4270	3910
01/24/2022	76	7.25	2340	3330	3883
01/24/2022	80	7	2320	3920	3840
01/24/2022	75	5.25	1980	3060	3437
01/26/2022	72	5.5	2300	3780	3587
01/26/2022	72	6	1730	3160	3333
01/26/2022	72	4	1520	3490	3477
01/31/2022	52	5.5		4080	3577
02/02/2022	63	5.5	1870	3700	3757
02/02/2022	64	6	2270	3880	3887
02/09/2022	55	5.5	2680	4410	3997
03/22/2022	70	6	2360	3810	4033
03/28/2022	51	5.5	2050	3330	3850
03/28/2022	52	6.5	1960	3300	3480
03/28/2022	52	5.5	2020	3400	3343
03/31/2022	63	6.5	2860	4220	3640
04/06/2022	63	5.5	2560	4280	3967
04/08/2022	56	7.75	2150	3280	3927
04/12/2022	66	4.5	2670	4020	3860

TEX MIX

Boerne

Concrete Mix Submittal

Submittal Information

Submittal Name	GEORGES RANCH
Date Submitted	05/12/2023
Customer	V.K. KNOWLTON CONSTRUC
Project Name	GEORGES RANCH
Use	CURB

Mix Information

Mix ID	0447201C
Mix Name	470 lbs cm, 25% ash, 3/8 crushed
Compressive Strength (f'c)	3500 psi @ 28 Days
Air Entrained	Yes

Mix Properties

Slump	4-6\5	**Sack Content**	5.00 94 lb/sack	**Total Mass**	3886 lb
Air	3-6\4.5	**Total Water**	29.97 gal	**Total Volume**	27.00 ft3
W/CM Ratio	0.53	**Water/Sack**	5.99 gal	**Unit Weight**	143.94 lb/ft3

Group	Material Description	Supplier	Absorption	Specific Gravity	Mass	Volume
Cement	CEMENT	Capitol Aggregates		3.15	400	2.035
Additive	FLY ASH - F	Integrated Materials		2	70	0.561
Aggregate	3/8TH CRUSHED LIMESTONE	Vulcan Materials	3.9 %	2.55	1686	10.596
	MANUFACTURED SAND	Johnson City Crushed Stone		2.79	1204	6.918
	SILICA SAND	Volner		2.65	276	1.669
Water	WATER			1	250	4.006
Admixture	AIR ENTRAINING AGENT Range: 0.25-4 fl oz/yd3	Euclid Chemical		1		
	X-15 Range: 2-12 fl oz/100 lb CM	Euclid Chemical		1		
Air	Air					1.215

Mix Notes

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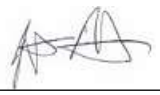
Phone 512-759-1438
Email justin.dickey@tex-mixconcrete.com

Sincerely,



Name/Title Justin Dickey / Technical Services Manager

Tex-Mix Concrete

Concrete Mix Evaluation Report

ACI 318 Required Average Strength

Mix ID 0447201C

Design Strength (f'c) 3000 psi @ 28 Days

Required Strength (f'cr) 3640 psi @ 28 Days

Number Of Tests 21

Average Strength 3923 psi

St Dev 447 psi

St Dev (Modified) 478 psi

Test Date	Temp (Concrete) (°F)	Comp Strength (3-Day) (psi)	Comp Strength (7-Day) (psi)	Acceptance Strength (28-Day) (psi)	Moving Average (psi)
01/08/2023	75	2510	3260	4080	
01/09/2023	75	2510	3140	4410	
01/09/2023	76	2430	3260	4090	4193
01/09/2023	68	2920	3620	4290	4263
01/09/2023	68	2850	3600	4490	4290
01/09/2023	69	2700	3270	4170	4317
01/09/2023	68	2620	3300	4470	4377
01/10/2023	70	1790	2280	3040	3893
01/11/2023	71	2400	2850	3610	3707
01/11/2023	71	2560	3160	4040	3563
01/11/2023	69	2650	3250	4240	3963
01/11/2023	73	2260	2780	3830	4037
01/13/2023	63	1440	2550	3700	3923
01/13/2023	60	1600	2600	4000	3843
01/13/2023	60	1290	2170	3340	3680
01/13/2023	63	1280	1930	3180	3507
01/19/2023	67		2610	3690	3403
01/19/2023	67		2900	4190	3687
01/19/2023	67		3060	4410	4097
02/01/2023	58		2250	3160	3920
02/01/2023	60		3580	3950	3840

Boerne

Concrete Mix Submittal

Submittal Information

Submittal Name	GEORGES RANCH
Date Submitted	05/12/2023
Customer	V.K. KNOWLTON CONSTRUC
Project Name	GEORGES RANCH
Use	PER PLANS

Mix Information

Mix ID	1037150
Mix Name	2500 PSI
Compressive Strength (f'c)	3000 psi @ 28 Days
Air Entrained	No

Mix Properties

Slump	4-6\5	**Sack Content**	4.00 94 lb/sack	**Total Mass**	4144 lb
Air	0-3\2	**Total Water**	31.05 gal	**Total Volume**	27.00 ft3
W/CM Ratio	0.69	**Water/Sack**	7.76 gal	**Unit Weight**	153.46 lb/ft3

Group	Material Description	Supplier	Absorption	Specific Gravity	Mass	Volume
Cement	CEMENT	Capitol Aggregates		3.15	320	1.628
Additive	FLY ASH - F	Integrated Materials		2	56	0.449
Aggregate	LIMESTONE ROCK	Johnson City Crushed Stone		2.79	1900	10.914
	MANUFACTURED SAND	Johnson City Crushed Stone		2.79	1345	7.725
	SILICA SAND	Volner		2.65	264	1.595
Water	WATER			1	259	4.151
Admixture	X-15 Range: 2-12 fl oz/100 lb CM	Euclid Chemical		1		
Air	Air					0.540

Mix Notes

Tex-Mix Concrete has no knowledge or authority regarding where this mix is to be placed therefore it is the responsibility of the project architect/engineer, and or contractor to ensure that the above designed mix parameters of compressive strength, water cement ratio, binder content, and air content, are appropriate for the anticipated environmental conditions (ie. ACI-318 chapter 4, and local building codes).

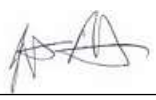
Tex-Mix Concrete guarantees the submitted mix design will achieve the required minimum specified compressive strength if the test specimens are made, cured, and tested in strict accordance with all applicable standards by a certified technician.

Chemical admixtures are dosed in accordance with the manufacturers recommendations and may be adjusted to compensate for ambient conditions.

Submittal Notes

Contact Justin Dickey
Phone 512-759-1438
Email justin.dickey@tex-mixconcrete.com

Sincerely,



Name/Title Justin Dickey / Technical Services Manager

TEXMIX

Concrete Mix Evaluation Report

ACI 318 Required Average Strength

Mix ID 1037150

Design Strength (f'c) 2500 psi @ 28 Days

Required Strength (f'cr) 2920 psi @ 28 Days

Number Of Tests 34

Average Strength 3431 psi

St Dev 316 psi

St Dev (Modified) 312 psi

Test Date	Temp (Concrete) (°F)	Slump (in)	Comp Strength (3-Day) (psi)	Comp Strength (7-Day) (psi)	Acceptance Strength (28-Day) (psi)	Moving Average (psi)
09/21/2021	88	6.5		2530	3560	
11/12/2021	84	6		2730	3870	
01/05/2022	65	6.5	1700	2010	3250	3560
01/05/2022	64	6.5	1690	2190	3160	3427
01/07/2022	76	4.5	1660	2090	3310	3240
01/10/2022	63	8	1590	2520	3430	3300
01/12/2022	76	8		1930	3140	3293
01/12/2022	74	4.75	2340	2410	3300	3290
01/12/2022	74	4.25	2290	2750	3350	3263
01/12/2022	76	5.75		2120	3520	3390
01/12/2022	74	6.25	1880	2390	3730	3533
01/12/2022	73	6.75	2030	2130	3400	3550
01/12/2022	74	6.5		1830	2980	3370
01/12/2022	74	7	2090	2280	3780	3387
01/17/2022	67	7.75		3110	3830	3530
01/17/2022	64	8		2620	3810	3807
01/17/2022	67	8		2680	3790	3810
01/19/2022	64	4.5	2190	2470	3040	3547
01/19/2022	52	7.25	2580	2470	3320	3383
01/19/2022	63	5	2280	2420	3830	3397
01/19/2022	67	7	2300	2350	3410	3520
01/24/2022	76	7.25	1400	2340	3330	3523
01/24/2022	75	5.25	1730	1980	3060	3267
01/26/2022	72	5.5	2110	2300	3780	3390
01/26/2022	72	7.5	1200	1240	3000	3280
01/26/2022	72	6	1590	1730	3160	3313
01/26/2022	72	4	1460	1520	3490	3217
02/02/2022	63	5.5	1770	1870	3700	3450
02/02/2022	64	6	1980	2270	3880	3690
02/02/2022	63	6.5	1060	1270	2600	3393
03/22/2022	70	6		2360	3810	3430
03/28/2022	51	5.5	1310	2050	3330	3247
03/28/2022	52	6.5	1130	1960	3300	3480
03/28/2022	52	5.5	1340	2020	3400	3343

Concrete Mix Submittal

Submittal Information

Submittal Name	GEORGES RANCH
Date Submitted	05/12/2023
Customer	V.K. KNOWLTON CONSTRUC
Project Name	GEORGES RANCH
Use	GROUT

Mix Information

Mix ID	7547251
Mix Name	5sk grout
Air Entrained	Yes

Mix Properties

Slump	3-5\4	**Sack Content**	5.00 94 lb/sack	**Total Mass**	3986 lb
Air	3-6\4.5	**Total Water**	33.50 gal	**Total Volume**	27.00 ft3
W/CM Ratio	0.59	**Water/Sack**	6.70 gal	**Unit Weight**	147.63 lb/ft3

Group	Material Description	Supplier	Absorption	Specific Gravity	Mass	Volume
Cement	CEMENT	Capitol Aggregates		3.15	400	2.035
Additive	FLY ASH - F	Integrated Materials		2	70	0.561
Aggregate	MANUFACTURED SAND	Johnson City Crushed Stone		2.79	2843	16.333
	SILICA SAND	Volner		2.65	393	2.378
Water	WATER			1	279	4.478
Admixture	AIR ENTRAINING AGENT Range: 0.25-4 fl oz/yd3	Euclid Chemical		1		
	X-15 Range: 2-12 fl oz/100 lb CM	Euclid Chemical		1		
Air	Air					1.215

Mix Notes

Tex-Mix Concrete has no knowledge or authority regarding where this mix is to be placed therefore it is the responsibility of the project architect/engineer, and or contractor to ensure that the above designed mix parameters of compressive strength, water cement ratio, binder content, and air content, are appropriate for the anticipated environmental conditions (ie. ACI-318 chapter 4, and local building codes).

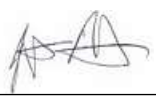
Tex-Mix Concrete guarantees the submitted mix design will achieve the required minimum specified compressive strength if the test specimens are made, cured, and tested in strict accordance with all applicable standards by a certified technician.

Chemical admixtures are dosed in accordance with the manufacturers recommendations and may be adjusted to compensate for ambient conditions.

Submittal Notes

Contact Justin Dickey
Phone 512-759-1438
Email justin.dickey@tex-mixconcrete.com

Sincerely,



Name/Title Justin Dickey / Technical Services Manager

Capitol Cement
11551 Nacogdoches Rd.
San Antonio, TX 78217

Type I L (15) Cement

Date: November 9, 2022

Production Period:
Beginning October 1, 2022
Ending October 31, 2022

CHEMICAL			PHYSICAL		
Item	Spec. Limit	Test Result	Item	Spec. Limit	Test Result
SiO2 (%)		19.5	Air Content of Mortar (volume %)	*12 max*	9.4
Al2O3 (%)		5.2			
Fe2O3 (%)		1.9	Blaine Fineness (m2/kg)	*A*	406
CaO (%)		67			
MgO (%)		1.0	Autoclave Expansion (%)	*0.80%*	0.01
SO3 (%)	*3.0% max (b)*	3.5			
			ASTM C1038		0.003
Na2O (%)	*A*	0.10			
K2O (%)	*A*	0.51	Density		3.07
Equivalent alkalis (%)		0.43			
	minimum	0.39	Time of Setting (minutes)		
	maximum	0.45	Vicat, Initial	*Not less than 45*	90
Ignition Loss (%)	*10% max*	7.0	Vicat, Final	*Not more than 420*	237
Insoluble Residue (%)		0.82			
Class F Fly Ash (%)			Compessive Strength		
CaO % in Ash	*A*		1 Day (psi)	*A*	2,100
Limestone (%)	*15% max*	12.82	3 Day (psi)	*minimum (1890)*	3,800
CO2 (%)		5.45	7 Day (psi)	*minimum (2900)*	4,680
CaCO3 in Limestone (%)		96	28 Day (psi) (Sep)	*minimum (3620)*	6,260
C3A (%)		11			
C3S (%)		78			
C2S (%)		-3			
C4AF (%)		6			

(A) Not Applicable; (b) It is permissible to exceed the limit for SO3, provided it has been demonstrated by Test Method C-1038 that the cement will not develop expansion exceeding 0.020% at 14 days.

We certify that the above cement, at the time of shipment meets the chemical and physical requirements of the current ASTM C 595, C 1012, C 227 specifications. The above data represents the averages of representative samples from production.

Douglas Conroy, Chief Chemist

Resource Materials Testing

"Specialists in Pozzolan Testing"

24 Fine Drive Murphy, NC 28906 828.506.7636/828.361.1114

REPORT OF FLY ASH ANALYSIS

TO: Flyash Distributors, LLC; DBA Texas Fly Ash
Attn: Mr. Greg Curlee
12409 Quaker Ave
Lubbock, TX 79424

PROJECT NO. RMT-612
SAMPLE NO. 24954
DATE REC.: 12-21-20
DATE REP.: 01-26-21

PROJECT NAME: Texas Fly Ash Quality Assurance Program
SAMPLE ID.: Carbon 2 Power Plant Sample load ticket: RRC December 2020

CHEMICAL ANALYSIS:	RESULTS:	SPECIFICATION F/C ASTM C618 AASHTO M295
Silicon Dioxide, SiO_2, %	61.76	----
Aluminum Oxide, Al_2O_3, %	24.87	----
Iron Oxide, Fe_2O_3, %	5.54	----
Sum of SiO_2, Al_2O_3 & Fe_2O_3, %	92.17	70/50 Min
Calcium Oxide, CaO, %	3.87	----
Magnesium Oxide, MgO, %	0.97	----
Sodium Oxide, Na_2O, %	0.30	----
Potassium Oxide, K_2O, %	1.15	----
Sulfur Trioxide, SO_3, %	0.33	5.0 Max
Moisture Content, %	0.18	3.0 Max
Loss on Ignition, %	0.69	6.0 Max 5.0 Max

PHYSICAL ANALYSIS:	RESULTS:	SPECIFICATION F/C ASTM C618 AASHTO M295
Amount Retained on No. 325 Sieve, %	33.9	34 Max
Strength Activity Index		
Portland Cement @ 7 days, % of Control	79	75 Min
Portland Cement @ 28 days, % of Control	82	75 Min
Water Requirement, % of Control	97	105 Max
Autoclave Expansion, %	-0.01	0.8 Max
Density	2.07	----

This material meets the requirements of ASTM C 618 and AASHTO M 295 for the parameters tested.

By Robert L Smith
Robert L. Smith, Ph.D.

Gradation Test With Sieve Chart Report

Product 311-JOHNSON CITY CS
Specification ASTM C33 No. 57

21580779

Sample Information

Sample No 21580779
Date Sampled 06/03/2022 10:25
Sampled By Brandon Benton
Type Tex-Mix Testing
Method Stockpile

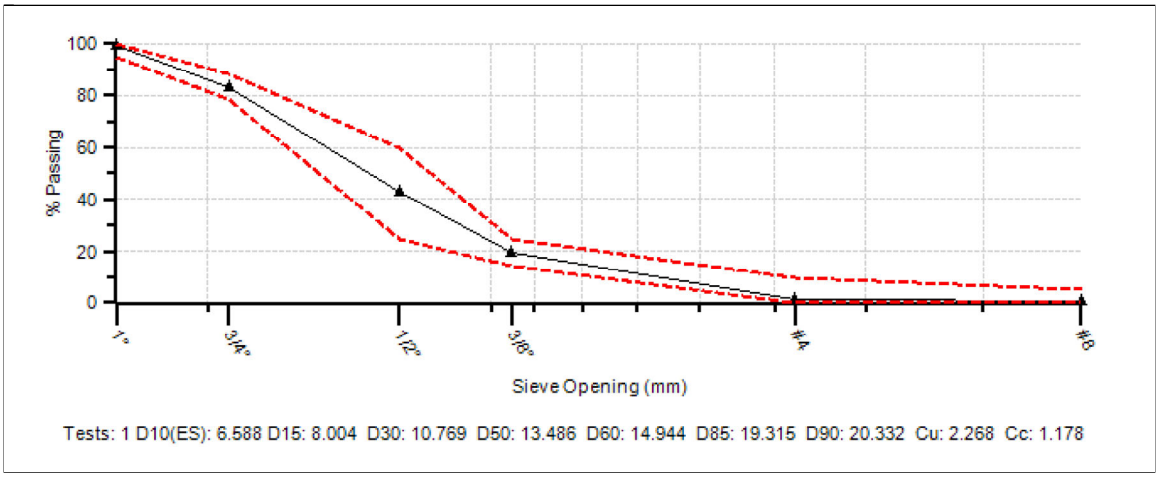
Split Sample ☐
Resample ☐

Gradation Results

Date Completed 06/03/2022 10:25
Tested By Brandon Benton

Unit	Moist Mass	Dry Mass	Wash Mass	Moisture %	Wash Loss %	Procedure
g		4335.00				

Sieve	Mass Retained	Cum Mass Retained	Ind % Retained	% Retained	% Passing	Target	Specification	Comment
1" (25mm)	27.00	27.00	0.6	0.6	99.4		95-100	
3/4" (19mm)	693.00	720.00	16.0	16.6	83.4			
1/2" (12.5mm)	1768.00	2488.00	40.8	57.4	42.6		25-60	
3/8" (9.5mm)	1004.00	3492.00	23.2	80.6	19.4			
#4 (4.75mm)	775.00	4267.00	17.9	98.4	1.6		0-10	
#8 (2.36mm)	29.00	4296.00	0.7	99.1	0.9		0-5	
Pan	29.00	4325.00	0.90	100.00	0.00			



Tests: 1 D10(ES): 6.588 D15: 8.004 D30: 10.769 D50: 13.486 D60: 14.944 D85: 19.315 D90: 20.332 Cu: 2.268 Cc: 1.178

Gradation Test With Sieve Chart Report

Plant 13-Spring Branch
Product 307-3/8TH CRUSHED LIMESTONE
Specification ASTM C33 No. 89

9925515

Sample Information

Sample No 9925515
Date Sampled 05/19/2022 13:47
Sampled By Savanna Rodriquez
Type Tex-Mix Testing
Method Stockpile

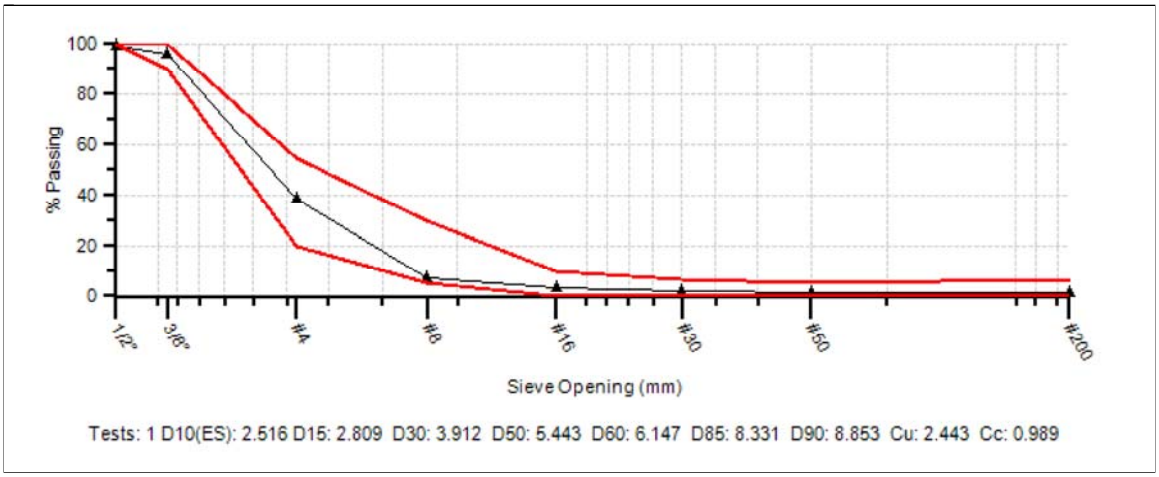
Split Sample ☐
Resample ☐

Gradation Results

Date Completed 05/19/2022 13:47
Tested By Savanna Rodriquez

Unit	Moist Mass	Dry Mass	Wash Mass	Moisture %	Wash Loss %	Procedure
g		1981.00				

Sieve	Mass Retained	Cum Mass Retained	Ind % Retained	% Retained	% Passing	Target	Specification	Comment
1/2" (12.5mm)	9.00	9.00	0.5	0.5	99.5		100-100	Coarse
3/8" (9.5mm)	74.00	83.00	3.7	4.2	95.8		90-100	
#4 (4.75mm)	1130.00	1213.00	57.0	61.2	38.8		20-55	
#8 (2.36mm)	627.00	1840.00	31.7	92.9	7.1		5-30	
#16 (1.18mm)	78.00	1918.00	3.9	96.8	3.2		0-10	
#30 (.6mm)	26.00	1944.00	1.3	98.1	1.9			
#50 (.3mm)	5.00	1949.00	0.3	98.4	1.6		0-5	
#200 (75µm)	5.00	1954.00	0.25	98.64	1.36			
Pan	25.00	1979.00	1.36	100.00	0.00			



Tests: 1 D10(ES): 2.516 D15: 2.809 D30: 3.912 D50: 5.443 D60: 6.147 D85: 8.331 D90: 8.853 Cu: 2.443 Cc: 0.989

Gradation Test With Sieve Chart Report

77163313

Product 301-MANUFACTURED SAND
Specification ASTM C33 Sand

Sample Information

Sample No 77163313
Date Sampled 06/02/2022 09:10
Sampled By Brandon Benton
Type Tex-Mix Testing
Method Stockpile

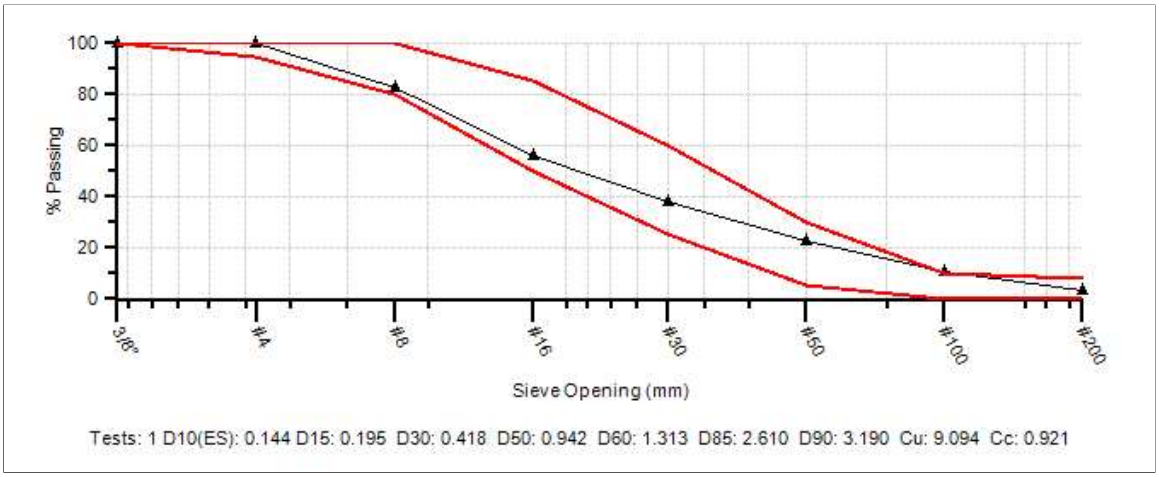
Split Sample ☐
Resample ☐

Gradation Results

Date Completed 06/02/2022 09:10
Tested By Brandon Benton

Unit	Moist Mass	Dry Mass	Wash Mass	Moisture %	Wash Loss %	Procedure
g		799.00				

Sieve	Mass Retained	Cum Mass Retained	Ind % Retained	% Retained	% Passing	Target	Specification	Comment
3/8" (9.5mm)	0.00	0.00	0.0	0.0	100.0		100-100	
#4 (4.75mm)	1.00	1.00	0.1	0.1	99.9		95-100	
#8 (2.36mm)	139.00	140.00	17.4	17.5	82.5		80-100	
#16 (1.18mm)	212.00	352.00	26.5	44.1	55.9		50-85	
#30 (.6mm)	142.00	494.00	17.8	61.8	38.2		25-60	
#50 (.3mm)	125.00	619.00	15.6	77.5	22.5		5-30	
#100 (.15mm)	97.00	716.00	12.1	89.6	10.4		0-10	Fine
#200 (75µm)	58.00	774.00	7.26	96.87	3.13			
Pan	23.00	797.00	3.13	100.00	0.00			



Gradation Test With Sieve Chart Report

Plant 23-Boerne
Product 300-SILICA SAND
Specification ASTM C33 Sand

48086903

Sample Information

Sample No 48086903
Date Sampled 06/03/2022 08:16
Sampled By Savanna Rodriquez
Type Tex-Mix Testing
Method Stockpile

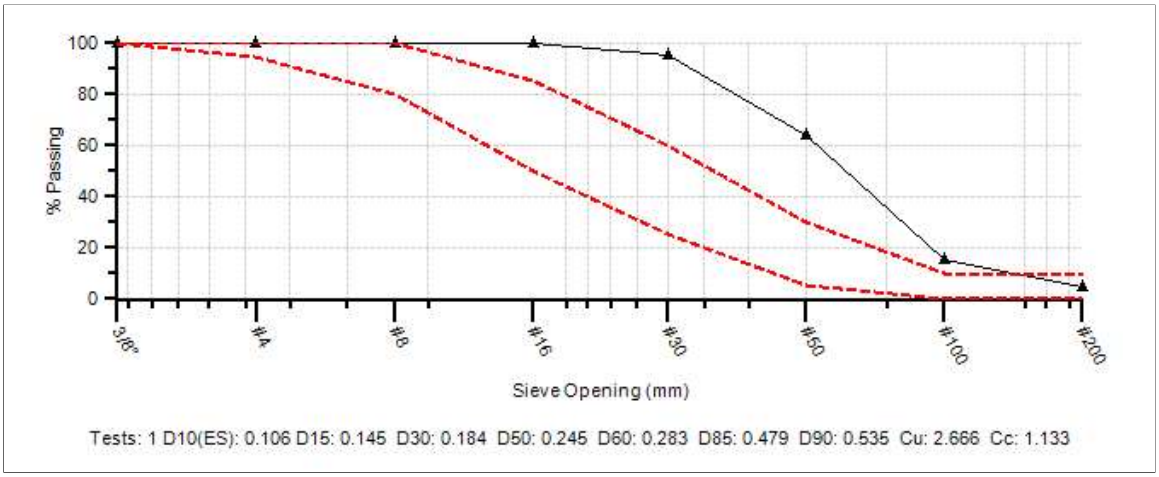
Split Sample ☐
Resample ☐

Gradation Results

Date Completed 06/03/2022 08:16
Tested By Savanna Rodriquez

Unit	Moist Mass	Dry Mass	Wash Mass	Moisture %	Wash Loss %	Procedure
g		715.00				

Sieve	Mass Retained	Cum Mass Retained	Ind % Retained	% Retained	% Passing	Target	Specification	Comment
3/8" (9.5mm)	0.00	0.00	0.0	0.0	100.0		100-100	
#4 (4.75mm)	1.00	1.00	0.1	0.1	99.9		95-100	
#8 (2.36mm)	0.00	1.00	0.0	0.1	99.9		80-100	
#16 (1.18mm)	1.00	2.00	0.1	0.3	99.7		50-85	Fine
#30 (.6mm)	33.00	35.00	4.6	4.9	95.1		25-60	Fine
#50 (.3mm)	222.00	257.00	31.0	35.9	64.1		5-30	Fine
#100 (.15mm)	347.00	604.00	48.5	84.5	15.5		0-10	Fine
#200 (75µm)	79.00	683.00	11.05	95.52	4.48			
Pan	32.00	715.00	4.48	100.00	0.00			



Tests: 1 D10(ES): 0.106 D15: 0.145 D30: 0.184 D50: 0.245 D60: 0.283 D85: 0.479 D90: 0.535 Cu: 2.666 Cc: 1.133

MID RANGE WATER REDUCERS

Master Format #: 03 30 00 03 40 00 03 70 00

EUCON™ X15

MID RANGE WATER REDUCING ADMIXTURE

EUCLID CHEMICAL

PRODUCT INFORMATION

PACKAGING

Packaged in bulk, 275 gal (1041 L) totes, 55 gal (208 L) drums, and 5 gal (18.9 L) pails

SHELF LIFE

1 year in original, unopened container

SPECIFICATIONS/COMPLIANCES

ASTM C494, Type A & F

AASHTO M 194

DESCRIPTION

EUCON X15 is a mid range water reducing and plasticizing admixture for concrete. EUCON X15 shows improved finishing characteristics when compared to other commonly used Type A (typically 5-6% water reduction) or Type F (typically 12-15% water reduction) admixtures. This mid range approach to water reducing admixtures allows for a wide range of usable dosage rates for a broad application spectrum. EUCON X15 contains no added chlorides or chemicals known to promote the corrosion of steel.

PRODUCT CHARACTERISTICS

FEATURES & BENEFITS

- Improves workability / finishability
- Produces concrete with lower water / cement ratio for increased strength
- Increased durabilty and less cracking
- Lower water / cement ratio allows for lower cement content, saving the producer money

PRIMARY APPLICATIONS

- Flatwork concrete
- Architectural concrete
- General purpose ready mixed concrete
- Concrete containing fly ash and other pozzolans

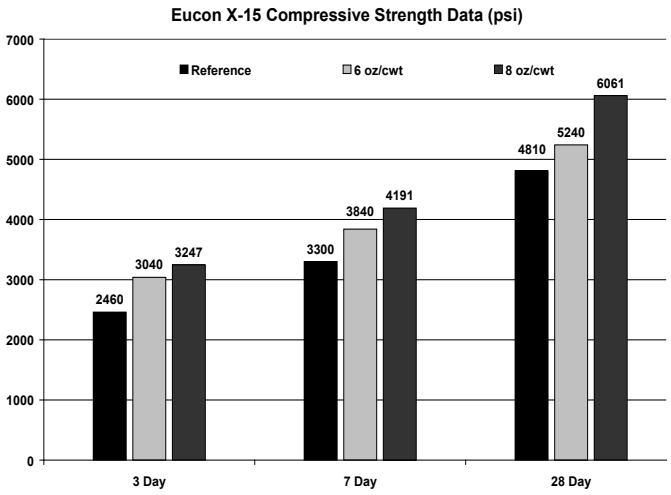
PRECAUTIONS/LIMITATIONS

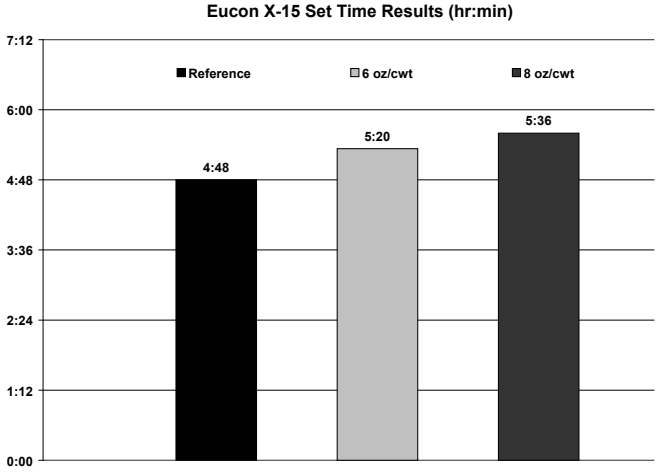
- Care should be taken to maintain EUCON X15 above freezing; however, freezing and subsequent thawing will not harm the material if thoroughly agitated. Do not agitate with air or an air lance.
- Add to mix independent of other admixtures.
- In all cases, consult the Safety Data Sheet before use.

TECHNICAL INFORMATION

PERFORMANCE DATA

The following test results were achieved using typical ASTM C494 mix design requirements, 517 lb/yd^3 (307 kg/m^3) cement content and similar (± 0.5)% air content. These results were obtained under laboratory conditions with materials and mix designs meeting the specifications of ASTM C494. Changes in materials and mix designs can affect the dosage response.





DIRECTIONS FOR USE

EUCON X15 is typically used at dosages of 4-15 oz/100 lbs (260-1000 mL/100 kg) of cementitious material. EUCON X15 provides excellent performance and standard water reduction for most applications at dosage rates of 4-10 oz/100 lbs (260 to mL/650 kg) of cementitious material.

Dosage recommendations depend on the characteristics of the materials being used in the mix design. Higher dosages are acceptable with prior testing and confirmation of the desired performance with specific materials used.

EUCON X15 should be added to the initial batch water when possible. It should not come in contact with dry cement or other admixtures until they are mixed with the concrete batch. Field testing is strongly recommended to optimize dose range and performance expectations with local materials. EUCON X15 is compatible with Euclid Chemical admixtures.