TECHNICAL DATA SHEET

TEC 10

MULTI COMPONENT POWDERED ADMIXTURE

SIMPLIFIES THE PRODUCTION OF GFRC

HIGHER STRENGTH

HELPS ELIMINATE SHRINKING & CRACKING

40 GROSSET DRIVE, SUITE 200, KIRKWOOD, NY 13795
1 (800) 475-1975 • (607) 775-1948 • WWW.TRINIC.US • @TRINICLLC

DESCRIPTION

Trinic Tec 10 admix is a multi-component powdered admixture that takes the hassle out of producing ultra-high performance concrete (UHPC) glass fiber reinforced concrete (GFRC), reactive powder concrete (RPC). The easy to understand dosage simplifies what can become an overly complicated process.

BENEFITS OF USE

- No more mixing and matching several different admixtures at different dosage rates to produce high performance concrete
- Eliminates the overnight shipping costs during winter of liquid polymers
- Eliminates foaming and moldy product problems associated with liquid polymers
- Contains a high quality UV stable micro polymer specifically designed for the production of UHPC, GFRC, and RPC
- Eliminates the need for a 7-day wet cure
- Helps eliminate pinholes
- Improves color dispersion, intensity, and stability, resulting in better color “pop”
- Contains specialized additives for water reduction without effecting spray up applications
- Helps eliminate surface crazing, bowing, and curling
- Closes the internal capillaries within the GFRC matrix leading to a denser, more acid and stain resistant concrete
- Mixes faster than traditional GFRC with less cement clumps
- More homogeneous mixes, even with less than ideal mixers
- Meets the requirements of ASTM C-494 Type S

DOSING & MIXING

Dose Trinic Tec 10 admix at 3% of the cementitious weight. If needed the dosage can be increased up to 4% of the cementitious weight. May be used in a traditional wetcast mixes at 2% of the cementitious content.

TEMPERATURE / CURE RATE

Batch temperatures should be below 70°F for effective workability time. Do not exceed 140°F during curing process. Concrete should be covered with plastic to maintain moisture and prevent problems such as warpage, dry shrinkage cracks and maintain strength gains. Trinic Hydration Stabilizer can be added to slow initial set times. Trinic Stage ll Accelerator can be added to for early and ultimate strength gains.

ASTM TESTING

TEC 10 admix has been tested in accordance with ASTM C494 Type S (Specific performance admixtures) and has met all the requirements defined in ASTM document “Standard Specifications for Chemical Admixtures for Concrete C494/C494M-13.

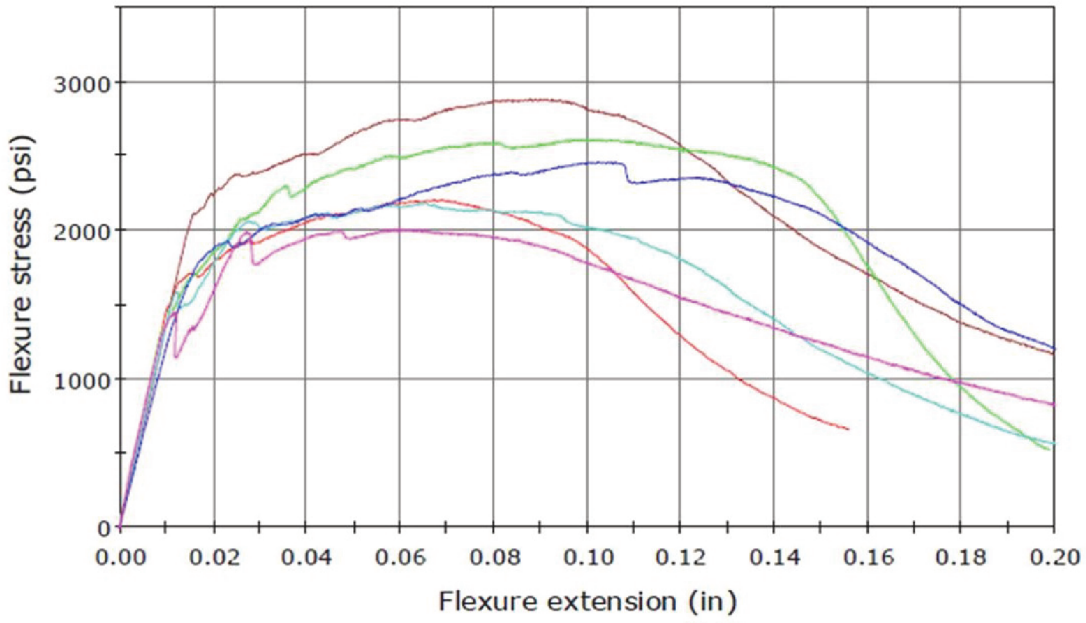
Flex Test: ASTM C-947-3

Length Change Test: ASTM C-494

Compression Tests: ASTM C-39

Please refer to our complete test results for more information. You can obtain a free copy by contacting Trinic.

TRINIC GFRC ADMIX (TEC 10) AT 3% - 28 DAY FLEXURAL TESTS



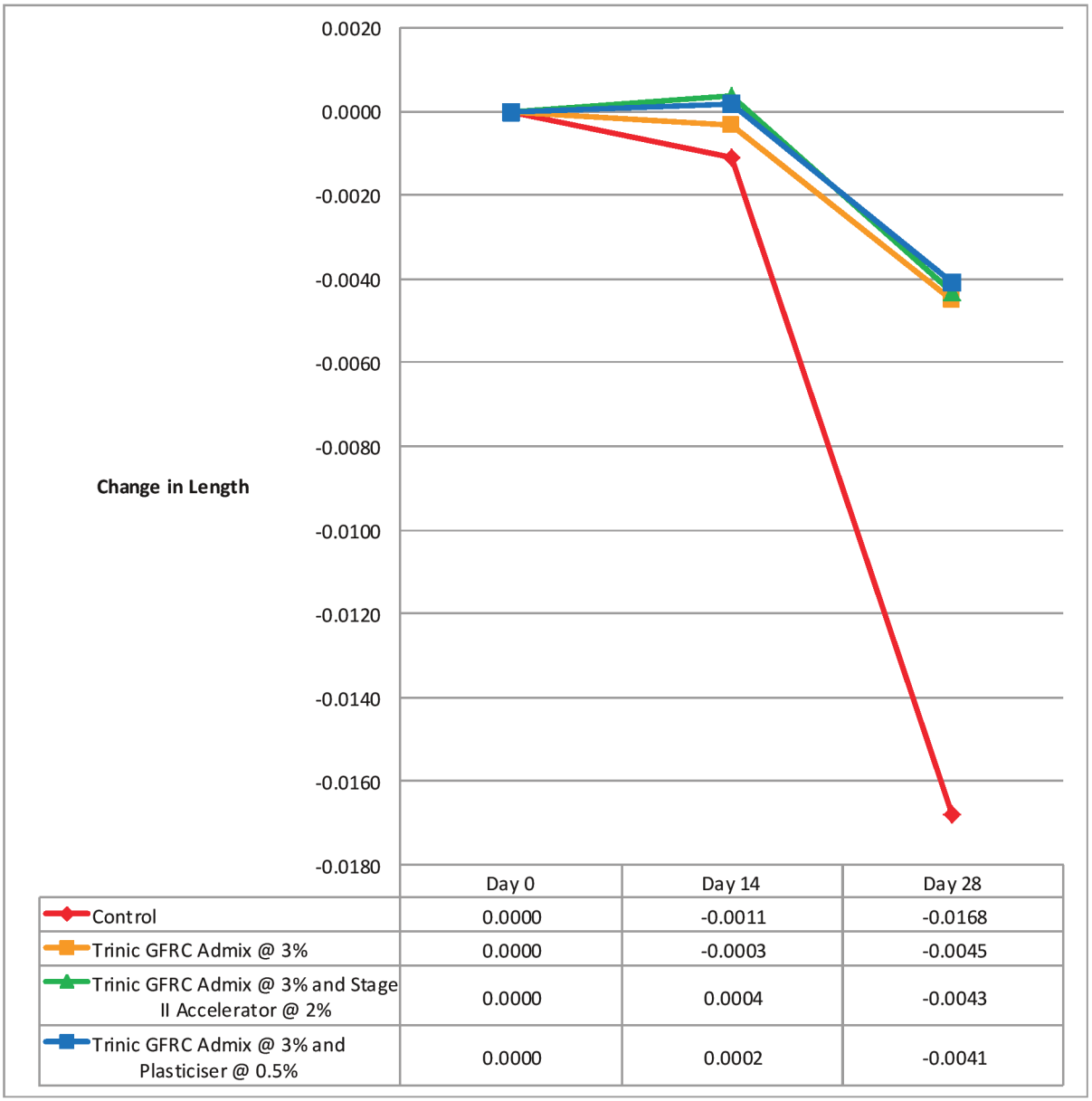
YIELD DATA

SPECIMEN LABEL	FLEXURAL LOAD AT YIELD (LBF)	FLEXURAL YIELD STRENGTH (PSI)	DEFLECTION AT YIELD (IN)
G1-A	87.4	1750	0.019
G1-B	119.0	2380	0.026
G2-A	93.8	1875	0.021
G2-B	93.4	1865	0.022
G3-A	94.5	1890	0.024
G3-B	70.5	1410	0.017

ULTIMATE DATA

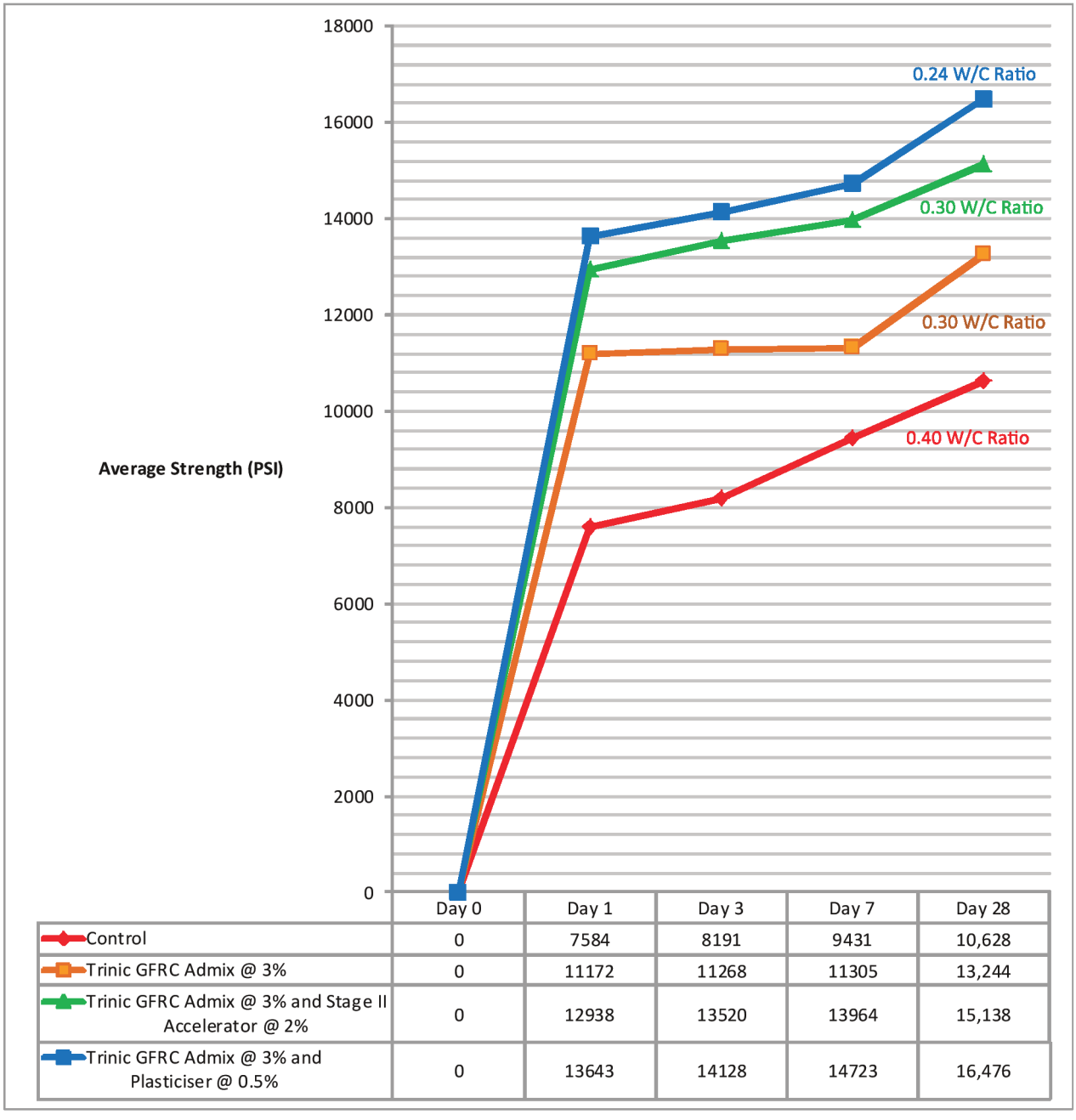
SPECIMEN LABEL	ULTIMATE FLEXURAL LOAD (LBF)	FLEXURAL ULTIMATE STRENGTH (PSI)	DEFLECTION AT ULTIMATE FLEXURAL LOAD (IN)
G1-A	110.4	2205	0.067
G1-B	144.3	2885	0.088
G2-A	130.8	2615	0.099
G2-B	109.4	2190	0.064
G3-A	123.1	2460	0.106
G3-B	100.4	2010	0.059

TRINIC GFRC ADMIX (TEC 10) LENGTH CHANGE TESTS



	Day 0	Day 14	Day 28
Control	0.0000	-0.0011	-0.0168
Trinic GFRC Admix @ 3%	0.0000	-0.0003	-0.0045
Trinic GFRC Admix @ 3% and Stage II Accelerator @ 2%	0.0000	0.0004	-0.0043
Trinic GFRC Admix @ 3% and Plasticiser @ 0.5%	0.0000	0.0002	-0.0041

TRINIC GFRC ADMIX (TEC 10) COMPRESSION TESTS OF 4"X 8" CYLINDERS



	Day 0	Day 1	Day 3	Day 7	Day 28
Control	0	7584	8191	9431	10,628
Trinic GFRC Admix @ 3%	0	11172	11268	11305	13,244
Trinic GFRC Admix @ 3% and Stage II Accelerator @ 2%	0	12938	13520	13964	15,138
Trinic GFRC Admix @ 3% and Plasticiser @ 0.5%	0	13643	14128	14723	16,476

MIX DESIGN

Trinic has developed an easy to use spread sheet to assist you in developing several high and ultra high performance mix designs. To obtain a free copy please contact Trinic LLC.

BASIC GFRC MIX ABOUT 1/2 CF

- This is enough to produce 8 square feet of GFRC ¾" thick.
- Back coat is just face coat with glass fiber dosed in the range of 2-4% of the total dry weight of the batch

Portland Cement 30 lbs

- We recommend White Portland cement. Different cements will react slightly differently to the admixture.
- You can replace part of your Portland cement with a pozzolan to make stronger and greener GFRC. We recommend Bright White Silica Fume.
- Always make a test batch prior to production runs.

Sand 30 lbs

- Sand graded anywhere from 30 grit (fairly course) to 70 grit (very fine) can be used
- Recommend starting with a 40-50 grit sand for face coats and back coats.
- You can offset thirsty fine sand with additional Trinic Plasticizer.

Water - 9 lbs or 1.08 gal

- This will give you a water to cement ratio of .3, which is a very good starting point
- You can add up to an additional 1% of the cementitious weight of Trinic Plasticiser to make a Self-Consolidating GFRC Mix. Start at .25% Plasticiser and work your way up from there as required.

Trinic Tec 10 Admix

- Dose at 3% of the cementitous weight. Ex. 30 Lbs. (cementitous content) x 3% = 0.9 lbs Trinic Tec 10 admix.

Water Demand

- Cement Type - Different cement types will have different water demands to reach the same slump. Not just white and grey, but cement from different mills will react differently.
- Sand - The size of the sand grain and the sand type both have an effect on slump. Generally the finer the sand the higher the water demand.
- The water to cement ratio is the total water divided by the total cementitious content.
- The water in the sand or the absorption factor of the sand must be accounted for in order to calculate an accurate water to cement ratio.
- Extremely wet sand can contain up to 10% moisture.
- Dry sand can absorb up to about 2% of its weight in water. This is known as satisfying the sand's absorption factor.
- The sand absorption is largely responsible for the false set you may experience.

MIX DESIGN (CONT.)

Example with dry sand

- 30 lbs of sand and 30 lbs of cement. How much water gives you a .3 w/c ratio?
- 30 lbs of cement * .3 = 9 lbs of water
- 30 lbs sand with an absorption factor of 1.5 = .45 of additional water to satisfy the sand's absorption
- Adjusted water to achieve a .3 w/c ratio is 9.45 lbs

FAST SETTING MIX DESIGN

- **Sand 30 lbs**
- **Portland 25 lbs**
- **CSA Cement 5 lbs**
  - This can vary depending on required set times, this is 20% of portland dosage
- **Tec 10 Admix 0.9 lbs**
  - This is a 3% dosage based off cementitous total (3% x 30 lbs = 0.9 lbs)
- **Water**
  - Start off with a .30 water / cementitous ratio (9 lbs water, add about 80% mix, then add to taste)
- **Plasticiser**
  - Add plasticiser at up to 1% dosage for doing SCC
- **Fiber**
  - Add fiber in backer coats or all in one SCC pours at 3% total dry weight (60 lbs x 3% = 1.8 lbs fiber)

PACKAGING

20 lb. Bags
Super Sack Available Upon Request

COVERAGE / YIELD

20 lbs at 3% dosage will make up to 160 sq ft at 3/4” thick

SHELF LIFE / STORAGE

Shelf life: 6 months
Storage: store in sealed container, keep away from moisture

DISPOSAL

Follow all federal, state, and local regulations when disposing of this product.

LIMITATIONS

For use in glass fiber reinforced concrete and wetcast concrete.

WARRANTY

Warranty of this product, when used according to the directions, is limited to refund of purchase price, or replacement of product (if defective), at manufacturer / seller’s option. Trinic products shall not be liable for cost of labor or direct and/or incidental consequential damages.

SAFETY DATA SHEET

SDS for all Trinic products can be found on our website or by contacting us directly.