TechCrete® WT Joint System is required to be used with the TechCrete 2500 Waterproofing system when a joint system is required. This joint system builds on a track record of over 30 years of sealing horizontal plane and below-grade joints with impregnated foam sealants.

The system is comprised of pre-compressed, silicone- and impregnated-foam hybrid, installed into field-applied epoxy adhesive on the joint faces with the silicone bellows locked to the joint faces with a silicone sealant band.

The TechCrete WT Joint System features an innovation in sealant technology in the form of an acrylic adhesive infused into the cellular-foam base material. This new chemistry incorporates a hydrophobic microsphere component never before available in a sealant formulation.

The material features sealing performance significantly greater than any acrylic impregnated predecessor. In addition, it is odorless, clean handling, UV stable, non-staining, and features low temperature flexibility not previously available in asphalt, wax, or isobutylene-based predecessors.

The result is extension of the usability of the product to applications where asphalt and wax-based predecessors did not work well, i.e. under conditions of thermal shock (rapid opening and closing of joints during large temperature swings). These applications include joint-face adhered installations on top decks as well as intermediate decks.

Suitability is further extended to horizontal-plane joint applications in colder geographical regions to which asphalt and wax-based predecessors have not previously been recommended.

TYPICAL APPLICATIONS

- Ideal for new construction and retrofit of old or failed joint systems in concrete or in embedded metal angles where demolition and removal of the metal angles is not feasible or affordable.
- Ideal for lasting replacement of tee-to-tee caulk joints in precast parking decks and stadiums, or where pedestrian or vehicular traffic is expected.
- Airport Aprons
- Mall Bridge Connectors
- Below-Grade Walls
- Perimeter Joints
- Stair Towers
- Parking Decks
- Runways
- Ice-Floors
- Sidewalks
- Stadiums
- Decks
- Roadways
- Tunnel Walls
- Arenas

FEATURES

Watertight – The tensionless silicone bellows are installed just below the deck surface. This ensures watertightness is achieved at the deck surface.

Non-Invasive Anchoring – There are no hard metal-to-concrete connections with the TechCrete WT Joint System. This includes embedded pins, anchors, screws, bolts or tracks, trays or rails. The system is locked to the joint faces by means of the 1) back pressure of the foam; 2) the epoxy adhesive, and 3) the injected silicone sealant band at the joint face to foam and silicone bellows interface.

Continuity of Seal – As in all TechCrete WT Joint Systems, continuity of seal through changes in plane and direction is an essential performance differentiator. Details for watertight, field-fabricated transitions from deck to wall, at curbs, sidewalks, parapets, tees, and crosses are available from Alchemco.

Movement Capability – +50% and -50% (Total 100%) of nominal material size (see “Performance”).

Aesthetics & Versatility – Standard color is gray (other colors available), uniform bellows appearance, fuel resistance, and an enhanced ability to handle variations in joint size are among other system features.

SHELF LIFE & STORAGE

No known limit to shelf life. Keep container sealed and avoid prolonged exposure to direct sunlight.
WT Expansion Joint System

COMPOSITION
• TechCrete WT Joint System is produced by coating an impregnated-cellular foam with highway-grade silicone.
• The silicone external facing is factory applied to the foam at a width greater than maximum joint extension and is cured before final compression.
• Silicone application and curing takes place in a factory-controlled environment. In contrast to field-applied liquid sealant and backer-rod installations, no movement takes place during curing that can cause deformation or stresses in the material.
• When compressed, a bellows is created in the coating. As joint movement occurs the bellows simply folds and unfolds free of tension on the bondline, and virtually free of tensile stresses in the silicone material.
• The foam provides a resilient backing to the silicone coating, making the system capable of resisting reasonable transient point loads (see Performance).

PERFORMANCE
• Capable, as a dual-seal, of movements of +50%, -50% (100% total) of nominal material size.
• Substrates must be parallel, plumb and capable of resisting approximately 2.5 psi backpressure from the foam.
• Standard sizes from 1/2” (12mm) to 4” (100mm).
• Fuel Resistance – Silicone sealant is not degraded by contact with fuel. Swelling of the material will normally occur, but it will return to its original shape upon evaporation of the fuel.

APPLICATION
1. Store indoors at room temperature. Expansion is quicker when warm, slower when cold.
2. Ensure material nominal size matches joint size.
3. Mix epoxy and trowel a thin layer onto the joint faces to at least the depth of the TechCrete WT Joint system foam.
4. Apply a thin layer of epoxy to both sides of the joint face.
5. Remove shrink-wrap packaging and hardboard. Allow partial expansion until snug when inserted into epoxied joint faces.
6. Insert material into joint until bellows is flush with (below-grade or deck-to-wall) or recessed by 1/4” (6mm) in traffic applications.
7. Join lengths by pushing silicone coated ends firmly together.
8. Wipe silicone facing using clean, lint-free rag made damp with solvent.
9. Before the epoxy cures, force the tip of the sealant tube between the foam and the substrate, and inject a silicone sealant band. Tool overflow sealant into a cove bead between the top of the silicone bellows and the substrate. Tool silicone between joined lengths so that bellows is not restrained by excess silicone.

WARRANTY & SYSTEMS
The following warranties require the use of TechCrete WT Expansion Joint System and are only available through TechCrete Certified Applicators;

The following warranties are available when using TechCrete WT Expansion Joint System;

For additional information about the Alchemco system specifications or available warranties, either contact your local Alchemco distributor or Alchemco’s Technical Department at info@alchemco.com or call 800-610-2895.

WARNINGS
THIS PRODUCT IS NON TOXIC!
See Safety Data Sheet for further details regarding safe use of this product. Alchemco, 8590 Sanford Drive, Henrico, VA 23228. 800-610-2895.