In general, there are three types of acceptable substrates:

- Cement Mortar - Two-coat cement mortar beds reinforced with 2.5 lb galvanized metal lath, cured a minimum of 7 days
- Cement Backer Board (CBU) - Durrock, Fiberock, Hardibacker, PermaBase, Wonderboard
- Drywall - Dry locations only

The tile installation’s substructure, location and substrate type (e.g. CBU or concrete) will influence the details of how the substrate should be prepared. The following substrate preparation methods are detailed in the Tile Council of North America’s “2014 TCNA Handbook for Ceramic, Glass, and Stone Tile Installation” and are organized by alphanumeric designation (e.g. W243-14). Use the following chart to identify, which TCNA method is appropriate for your installation and refer to the TCNA Handbook for details. The TCNA Handbook is available for purchase at www.tcnatile.com.

### Unacceptable Substrates

- Single-float mortar bed walls (cement mortar beds, which do not employ cured scratch coats)
- Cement mortar beds reinforced with metal lath less than 2.5 lb per square yard (i.e. chicken wire)
- Wood Products such as plywood, luan, MDF, pressboard and composites

### Substrate Requirements

- Solid blocking for the anchoring of fixtures, such as shower doors and towel bars, must be installed prior to installing the tile substrate.
- Cement mortar beds must be cured a minimum of 7 days prior to tile installation.
- Treat CBU joints with mesh-tape and thin-set per the CBU manufacturer’s recommendations and allow to cure 48 hours prior to tile installation.
THIN-SET
We recommend the following white thin-sets for the installation:

Acceptable Thin-sets
- ARDEX X 77
- CUSTOM BUILDING PRODUCTS: Premium Glass Tile Thin-Set Mortar
- BOSTIK: Glass-Mate mixed with 425 Admixture
- LATICRETE: Glass Tile Adhesive
- MAPEI: Adesilex P10 Bright White Thin-Set Mortar mixed with Keraply Mortar Additive
- TEC SPECIALTY PRODUCTS: Super Flex Thin-Set Mortar

Unacceptable Adhesives
- Organic Adhesives (Mastic) - due to low bond strengths
- Epoxy - due to low flexibility

GROUT
May be grouted with cement-based sanded or unsanded grout, urethane grout or epoxy grout. Grout selection should be based on the grout joint size of the specific pattern and intended application.

MEMBRANES
There are a wide variety of anti-fracture and waterproofing membranes available for use in tile installations. Membranes will vary in type, installation method and performance. Depending on the application, installing over an anti-fracture membrane may be beneficial. Consult the membrane manufacturer for specific recommendations and limitations.

MOVEMENT JOINTS
Movement joints are essential for the success of most tile installations. Follow recommendations on Movement Joints EJ171-14 in the “2014 TCNA Handbook for Ceramic, Glass and Stone Tile Installation.” Movement joint requirements will vary based on substrata, climate and size of installation. An architect or design professional should be consulted when specifying the exact number and location of each movement joint.

FEATURE STRIP INSTALLATION
(installing next to thicker tile materials)
When installing adjacent to thicker materials, with the intention of the two tiles finishing in the same plane (flush), the substrate must first be brought up to a level such that the glass tile can be installed with the recommended amount of thin-set. Detailed information regarding multiple substrate build-up methods is available in the Installation section of our website, www.glasstile.com.

Caution: Installing glass tile over fresh excessively built-up thin-set mortars may result in tile cracking due to thin-set shrinkage.

CUTTING & DRILLING
Glass can be cut to meet jobsite dimensions with the use of a high-quality wet tile saw equipped with a continuous, smooth-rim, diamond glass tile blade or with score and snap glass cutting tools. To minimize chipping of tile and back coatings, fully support the tile during cutting, cut or drill slowly and cool the cutting or drilling tool with liberal water flow.
INSTALLATION PROCESS

Step 1 To initiate the bond coat, use the flat side of a trowel and firmly apply thin-set to the substrate.

Step 2 To establish the proper depth of the setting bed, use a 3/16” x 1/4” v-notch trowel to apply additional thin-set and comb full notches in one direction.

Step 3 Apply mosaic sheets to the thin-set setting bed, plastic film side out, with light, even pressure. Periodically, check thin-set for skinning (slight drying). If skinning occurs, remove thin-set and reapply.

Step 4 To achieve the flattest possible surface, lightly tap the sheets with a rubber grout float. Pay particular attention to the sheet-to-sheet intersections.

Step 5 After a full 24 hours (some installations may require extended cure times) starting at the corner; peel the plastic from the tile.

Step 6 If necessary, remove excess thin-set from the grout joints with a razor knife prior to grouting.

NOTE: Grout application and cleaning process will vary based on the type and brand of grout. Refer to grout manufacturer’s instructions for details.

For additional assistance, contact Technical Services at 877-648-8222 or techsupport@glasstile.com.

Step 7 Apply grout per the grout manufacturer’s instructions. When grouting with sanded grout, use care during application to minimize scratching.
Art Glass Mosaics do not need to be sealed, however, it is beneficial to seal cement-based grout. Installations should be sealed with Oceancare High Performance Penetrating Sealer.

**Oceancare High Performance Penetrating Sealer Hybrid Carrier Technology™**
Penetrates and protects grout, natural stone and other porous masonry materials. Forms an invisible, no-sheen barrier that is resistant to water and oil and provides superior stain protection. Low residue, easy to use formula. May be applied to dry, damp, cured or uncured grout or natural stone (seriously...immediately after grouting!).

**High Performance Enhancing Sealer**
A water-based, low VOC, all-in-one color enhancer and penetrating sealer for both interior and exterior applications. Intensifies and enriches the color of natural stone, grout, concrete and other porous masonry materials. Forms a barrier that is resistant to water and oil and provides superior stain protection.

**MAINTENANCE**
Installations should be maintained with Oceancare Products. For regular cleaning use a nylon scrub-brush or 3M white nylon scrub pad and the appropriate cleaner listed below.

- **Oceancare pH Neutral Tile & Stone Cleaner**
  A non-toxic, biodegradable, all-purpose, no-rinse cleaner designed for daily use on almost any hard surface. Also available in concentrate formula; when diluted with water, one quart of concentrate will make up to 96 gallons of cleaning solution.

- **Oceancare All Purpose Cleaner & Degreaser**
  A 100% natural, plant-derived, citrus-based alkaline cleaner that quickly cuts through heavy grease and oil.

- **Glass Tile Shower Cleaner**
  A CFC free aerosol cleaner, ideal for cleaning tile tub-surrounds and showers. Use on glass tile, grout, metal fixtures, porcelain, ceramic and natural stone.

- **Clean & Seal**
  An all-natural, biodegradable, powerful everyday cleaner, fortified with the sealing protection of Oceancare High Performance Penetrating Sealer. When used for regular cleaning, this product rejuvenates existing sealer and maintains stain protection at optimal levels.

- **Oceancare Calcium Releaser**
  A non-toxic, acid-free cleaner that removes hard water deposits from tile, shower doors and plumbing fixtures.

- **Oceancare Grout Haze Remover**
  A biodegradable, non-toxic, acid-free cleaner that removes cement-based grout haze and deep cleans heavily soiled cement-based grouts.

For product availability and pricing please contact an Oceancare dealer or visit www.oceancareproducts.com.