

QuarryCast® is a glassfiber reinforced gypsum composite made with natural aggregates and finished with a factory applied clear sealer, for interior use only. **IT IS NOT SUITABLE FOR USE ON FLOORS, EXTERIOR APPLICATIONS, OR WHERE IN CONTACT WITH WATER.** QuarryCast® is a non-combustible material that has been fire tested to the ASTM E84 Standard: Flame Spread Index = 0; Smoke Developed Index = 5.

STORAGE & HANDLING:

Delivery time should be scheduled to minimize storage time of QuarryCast® parts at the job site. Parts shall be kept clean and stored on a dry surface and not stacked or leaned on each other to prevent distortion and other physical damage. Use clean gloves when handling unpacked items.

ITEMS FOR INSTALLATION:

Brad Nailer (Air); Screw gun; Drill bits and countersink; #8 Screws; Level; Saw(s) - see cutting Instructions below; disposable dust masks (e.g. 3M Cupped respirators #8710); Cotton and/or rubber gloves; Sanding block; Sandpaper #40/80/120 grit; Adhesive; Painter's tape; Flexible scraper; Cellulose sponges; Clean rags; Caulk for joints (supplied by others); QuarryCast patching compound and clear sealer (by Formglas).

CUTTING INSTRUCTIONS:

Never "Wet Cut". Cutting dust represents a nuisance dust when exposed to occasional dust from cutting and may contain trace amounts of respirable silica. Take precautions to minimize dust production such as using dust collection attachments on saws etc. Always wear goggles and a respirator (or dust mask) for protection and to minimize any irritation. See MSDS for more specific details.

Use the most applicable method listed below for the type of cut required:

- A table saw with a diamond blade or Tungston grit blade (carbide tipped blades dull quickly)
- A hand held disc grinder with a 4" (100mm) diameter Diamond blade for smaller cuts - use a straight edge as a guide.
- A jigsaw with a Tungsten Grit blade - use primarily for curved cuts or cut-outs.

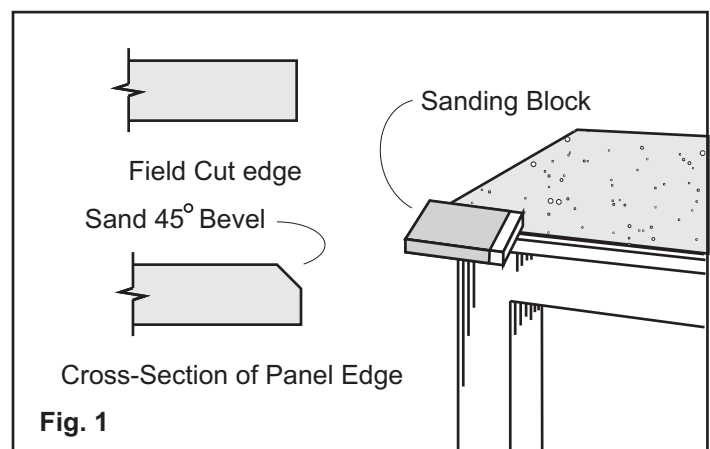
Note: Keep cutting surface clean to prevent parts from being marked.

GENERAL NOTES:

- 1) The substrates to accept QuarryCast® parts shall be surfaced with drywall or plywood that is installed straight and true within 1/8" in 8 linear ft. (3mm in 2500mm). Plywood is the preferred substrate material as it facilitates easier installation of most parts with the use of a Brad Nailer and T-head finishing nails in combination with adhesive.
- 2) Use a Formglas recommended adhesive to avoid the possibility of it bleeding through to the finished surface (e.g. PL400 - see page 5).
- 3) Texture and color variations occur within and between QuarryCast® parts ... mix panels at random.
- 4) Panels come from the factory with a 45° bevel on perimeter edges to prevent chipping. Panels cut during installation need to have a beveled edge reapplied by carefully sanding cut edges - See Fig. 1.
- 5) Use clean cotton or rubber gloves as required to ensure oils, adhesive and other contaminants are not transferred onto the pre-finished QuarryCast® surfaces.

VENEER PANELS:

1. Field cut panel edges require a 45° bevel to be reapplied to prevent chipping and of course to maintain the same joint appearance. Use a sanding block with #40 grit sandpaper to make a straight, even bevel to match the beveled edges on the panels supplied by the factory. See Fig. 1.



2. Apply adhesive in small dabs to the back of panels on approximately 9" [225mm] centers and inset 1½" [40mm] from all perimeter edges to prevent adhesive from oozing out onto visible surfaces. See Fig. 2. Use a Formglas recommended adhesive (see page 5) to prevent the possibility of the adhesive bleeding through to the finished surface.

3. Install panels by pressing them into position with a slight sliding motion to spread the adhesive evenly between the rear surface of the panel and the wall. Use a Brad Nailer (nail gun) to hold panels in place until the adhesive sets (use 16/18 ga. nails into drywall or plywood (preferred) substrate - See Fig. 3. Usually, the small countersunk nail heads from a Brad Nailer will blend in with the surface texture without the need for using QuarryCast® patching compound.

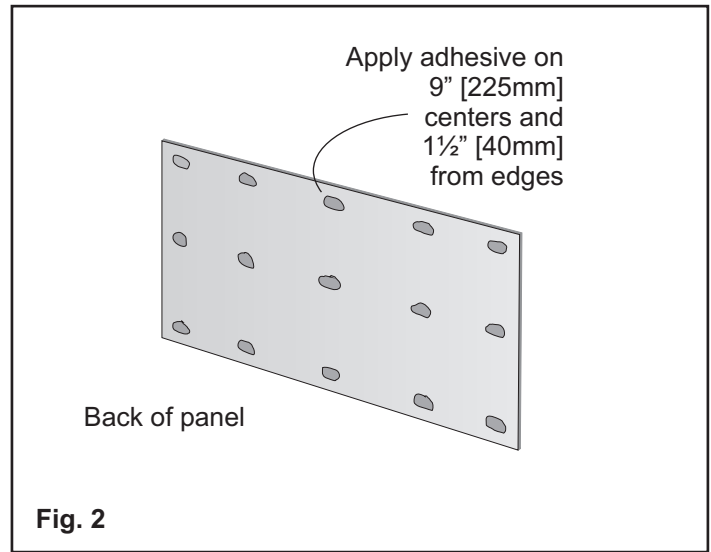


Fig. 2

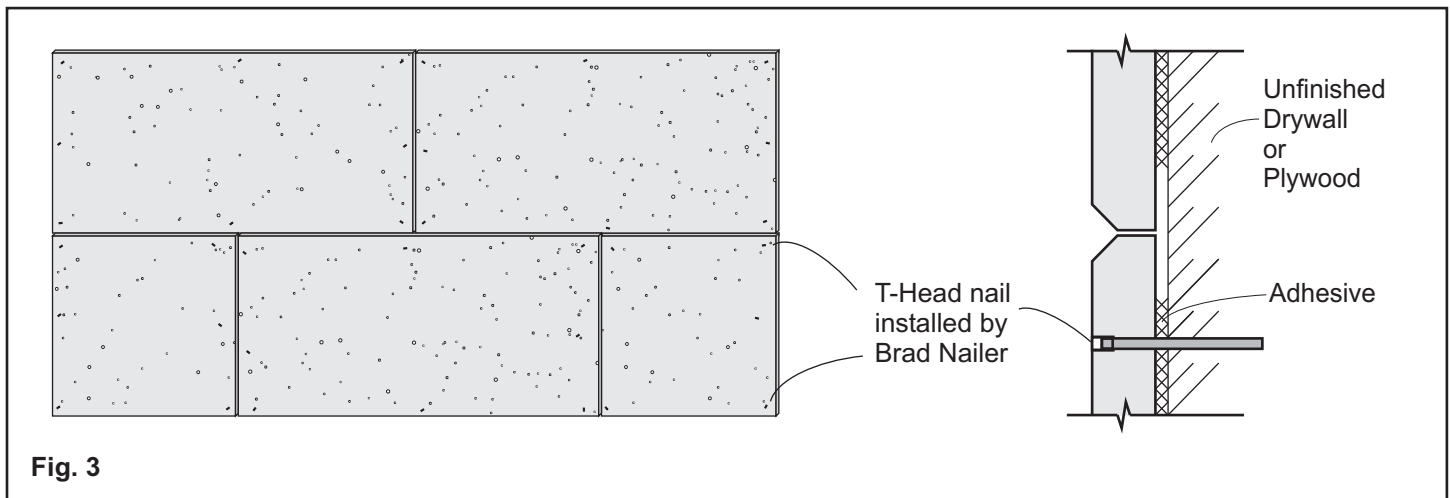


Fig. 3

4. Joint Options:

QuarryCast® Veneer panels can be installed with different types of joint treatments to create different aesthetic appearances. See Fig. 4

- A) Dry Butt Joint
- B) Caulked Joint
- C) Open Joint with Feature Strip
(E.g. metallic or plastic laminate strips installed between panel joints).

Note: Painting the substrate surface for use with open joints does not provide acceptable results.

5. Caulked Joints:

Caulked joints are to be recessed. Do NOT apply caulk to joints so it is flush with the surface. Refer to Fig. 5 on next page.

Note: Formglas does not supply caulk but recommends Brand name suppliers for use with specific QuarryCast® material colors. See page 5 for details.

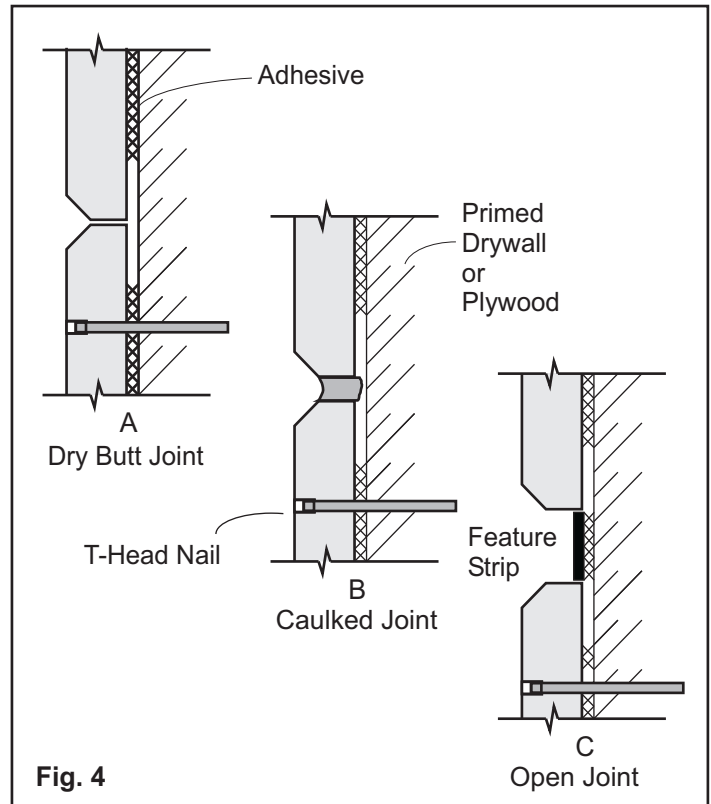
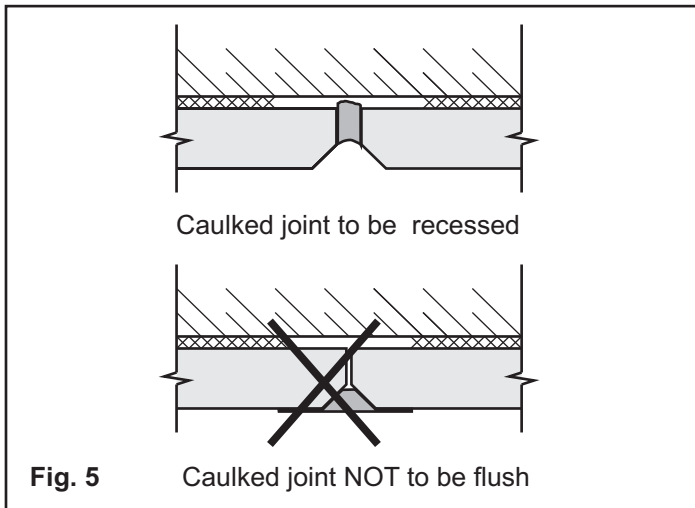


Fig. 4

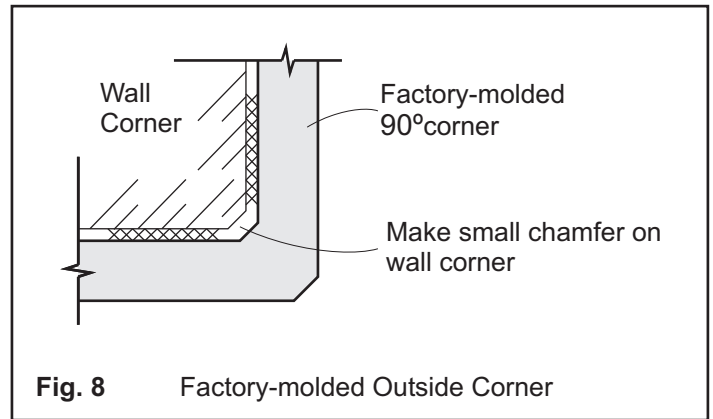
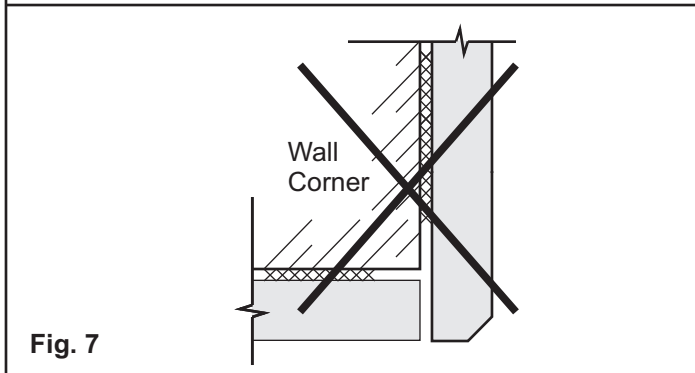
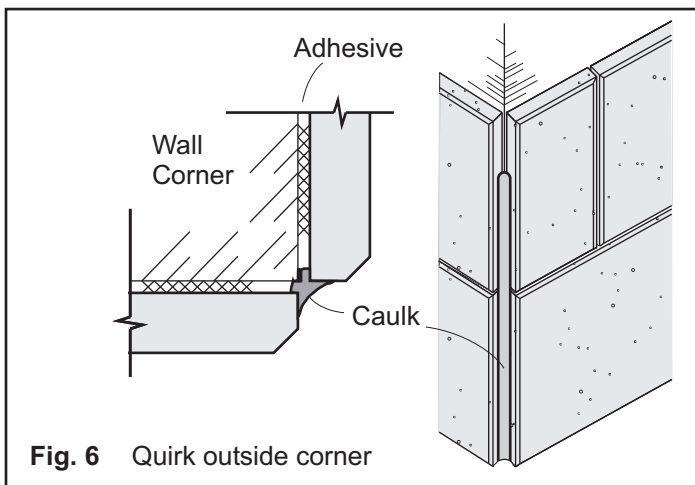


6. Corner Treatments:

“Quirk” Corners: If pre-made factory corners are not used, install “quirk” corners as illustrated in Fig. 6 and caulk joint. Do NOT install corners as shown in Fig. 7.

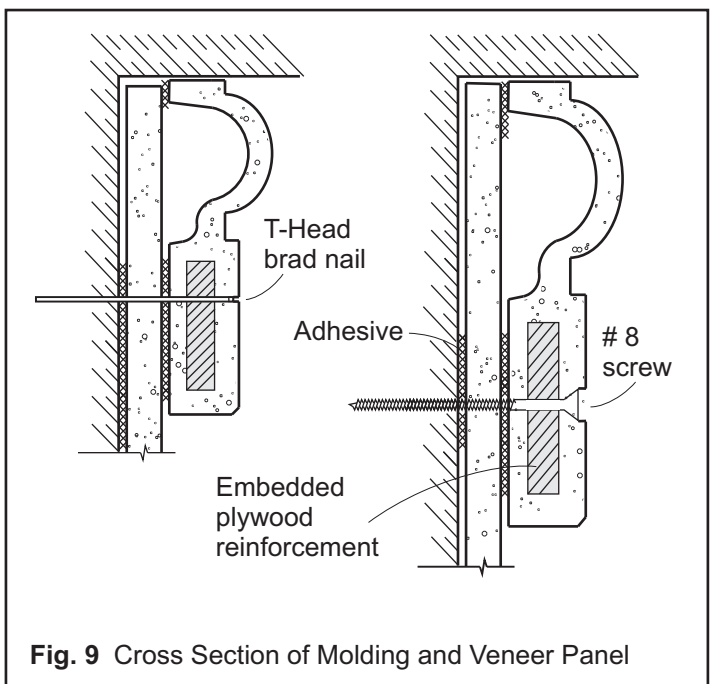
Factory-molded Corners: Pre-made 1-piece 90° outside corners are available for Veneer panels. The inside corner of the factory corner is NOT sharp and the wall corner may require a small chamfer to be made with a rasp file to facilitate the 1-piece corner fitting tight against both wall surfaces. Refer to Fig. 8.

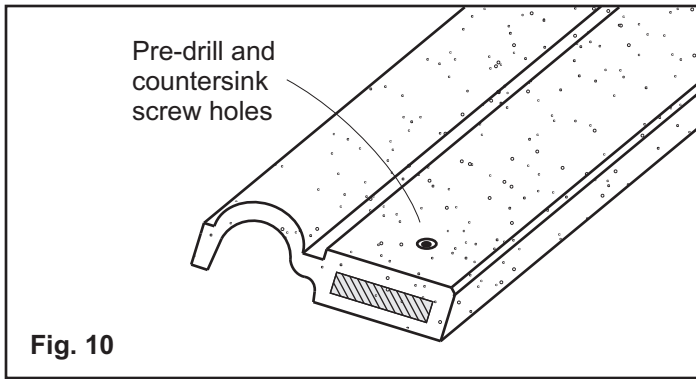
Inside Corners: Inside 90° Corners are to be installed with dry butt joints with cut panels placed tight against each other.



MOLDINGS and OTHER COMPONENTS:

1. Use adhesive and mechanical fasteners to secure QuarryCast® parts to the substrate. Most QuarryCast® parts, such as moldings, have built-in plywood strips embedded into the parts for reinforcement and attachment purposes. Install fasteners through these reinforced areas. Refer to the shop drawings for specific details. Install moldings over the top of Veneer panels, if used - see Fig. 9. Wherever possible, use a Brad Nailer and 16 ga. T-head nails of appropriate length to secure moldings. In most cases, the small depressions left by the Brad Nailer blends in with the surface texture of the QuarryCast® parts and do not require filling - but this is dictated by the installation particulars and part visibility. If moldings are larger and can not be properly secured in this manner, use #8 screws countersunk below the surface on 16" [400mm] o.c. into framing (or plywood substrate) and fill screw holes afterward with matching QuarryCast® patching compound, supplied by Formglas. Pre-drill countersunk holes (Fig. 9) and preferably, use countersunk “trim” screws which have a smaller diameter head than standard screws and therefore less noticeable.





2. Hole Filling and Patching:

Use QuarryCast patching compound for filling holes and chips. The patching compound is a thick dough-like compound and should be used sparingly and with precautions not to smear any beyond the hole as this will spoil the appearance. Remove any excess with a flexible scrapper. It is usually best to finger fill holes with a small amount of patching compound by forming a ball of compound that is of similar size as the hole to be filled. Press the ball of compound into the hole and finish flush with the surface and immediately remove any excess as explained above. After drying (24 hours), lightly sand with #120 sandpaper, wipe off dust, and coat the filled hole with QuarryCast® sealer supplied by Formglas (use a very small brush).

**Always use patching compound sparingly.
Avoid smearing compound beyond the holes.
Always remove excess compound immediately.**

3. Joint Treatment: Moldings and other components Joints are to be caulked. Leave a 1/8" [3mm] gap between moldings and other components - use a spacer to maintain a uniform gap. Joints can not be hidden and no attempt should be made to make multiple pieces look monolithic. Apply painter's tape to both sides of the joint as detailed in Fig. 11. Caulk should be recessed and not be placed flush with the surface - refer to Fig. 5. Remove tape before drying. Formglas does not supply color matching caulk but can recommend brands and colors for specific QuarryCast® colors - see page 5. Plan in advance to order caulk for the installation.

Joint Treatment Exception: Columns may be finished with QuarryCast® patching compound. Leave a 1/8" [3mm] gap between column joints - use a spacer to maintain a uniform gap. Apply painter's tape to both sides of the joint as detailed in Fig. 11 and place compound in the joint with a flexible scrapper and/or by hand and tool to make a uniformly recessed joint.

Joint Treatment Exception: Miters should be finished with QuarryCast® patching compound. Leave a 1/16"

gap between miter joints - see Fig. 12. Apply painter's tape to both sides of the joint as detailed in Fig. 11 and place compound in joint with a flexible scrapper and finish flush to edges. After 24 hours, lightly sand with #120 grit sandpaper, wipe off dust, and coat with QuarryCast® sealer, supplied by Formglas.

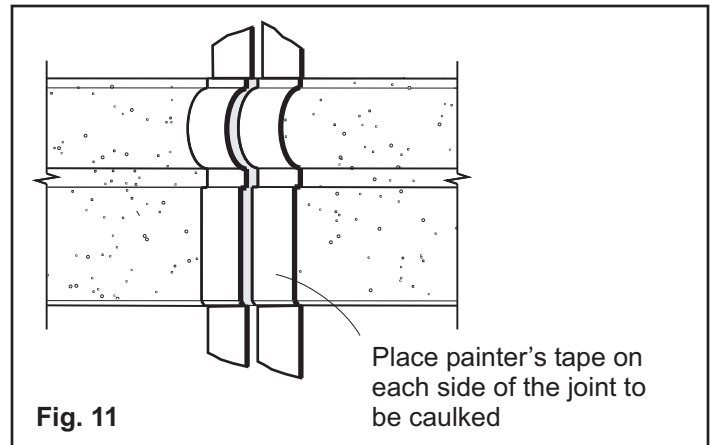
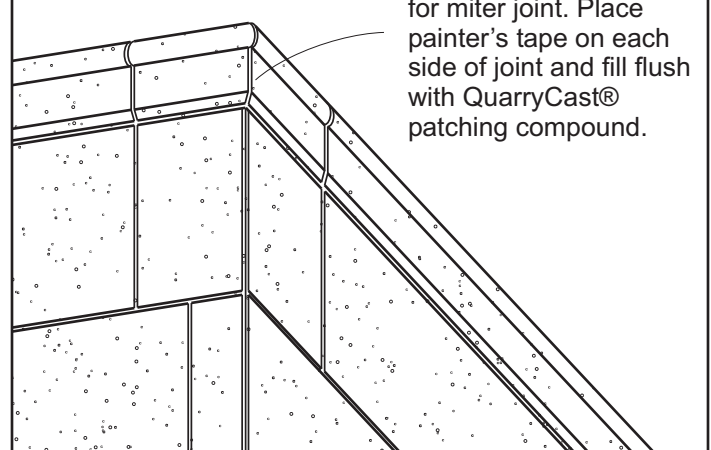


Fig. 12



CLEANING and MAINTENANCE:

- QuarryCast® has a factory applied clear sealer to reduce staining and make cleaning easier.
- Clean QuarryCast® parts with a water/soap solution and rinse with clean water and a sponge.
- Excessive dirt, pencil and rubber marks etc. Can usually be removed with a multi-purpose spray cleaner such as "Spray Nine®" and wiping after with a damp cloth. Do NOT use powdered cleansers or abrasives.

Repairs:

- Broken Corners: Re-attach with (clear) wood glue.
- Large Cracks & Chips: Fill as described in "Hole Filling" above. Use patching compound sparingly.
- Deep Scratches and Gouges: "Hand sand" out with #80 - #100 grit sandpaper and coat afterward with QuarryCast® clear sealer (available from Formglas) - or - Fill with QuarryCast® patching compound as described in "Hole Filling" above.

FINISHING MATERIALS

QuarryCast® Patching Compound (XGRT)

Patching Compound to Match QuarryCast® Material Color

Note: 1 quart of patching compound will fill approximately 600 screw holes or approximately 100 linear ft. [30m] of 1/8" [3mm] wide joints. Keep container sealed to prevent the compound from drying out and hardening.

QuarryCast® Sealer (XSLR)

Clear sealer for touch-up purposes. Parts come factory sealed.

Note: 1 quart of sealer is sufficient for most projects. Stir well before use.

Caulk: (Not supplied by Formglas) Brand name caulk for use with 12 QuarryCast® standard colors. Caulk is not an exact match.

Note: 1 standard tube will do approx. 150 linear ft [46 m] of 1/8" [3 mm] wide joints.

QuarryCast® Color	Caulk Brand	Caulk Color
SEATTLE SAND:	Dow Corning 790	" Precast White "
PRINCETON PINK:	Dow Corning 790	" Dusty Rose "
GALVESTON GREY:	Dow Corning 790	" Grey "
KYOTO COFFEE:	Dow Corning 790	" Natural Stone "
CANYON CLAY:	Dow Corning 790	" Adobe Tan "
BOISE BUFF:	Dow Corning 790	" Sand Stone "
T.K. GREEN:	Dow Corning 795	" Charcoal " (chrcol)
GREY 004-A:	Dow Corning 790	" Grey "
AQUA:	Dap 230	" Grey "
MOHAVE:	Dow Corning 790	" Precast White "
MOGUL MAUVE:	Dap Alex Plus	" Brown "
CORDOVAN:	Dow Corning 795	" Brick "

Recommended Adhesives:

PL 400, PL 400voc, PL Premium - Manufactured by the Henkel Corporation - sold under Loctite and Lepage Brand names.

Note: PL400voc & PL Premium have 50 g/l VOC's or less for use at Green Building projects such as LEED® where low emitting materials are required.