

**QUARRYCAST® INTERIOR MOLDED STONE  
(For Interior Use Only)**

1. **GENERAL:**
  1. Specify QuarryCast® (QC) in Division 6 - Subsection 06200 - "Finish Carpentry" or Subsection 06400 - "Architectural Woodwork".
  2. QuarryCast® is a finished product and should not be specified or treated as a gypsum product!
- 1.1 **Scope:**

Furnish all materials, labor, equipment, etc. to supply and erect the QuarryCast® units as indicated in compliance with local codes. Refer to "Installation Instructions" included with every shipment.
- 1.2 **Work Included:**
  1. Supply of QuarryCast® (QC) units.
  2. Installation of units & grout application.
  3. Repair, patching and cleaning.
- 1.3 **Work Excluded:**
  1. Back-up structure, framing, etc.
  2. Caulking is specified elsewhere.
- 1.4 **Intent:**

In all cases, the manufacturer's recommendations and "Installation Procedures" shall govern the work.
- 1.5 **Manufacturer - The QuarryCast® Division of :**

Formglas Inc.  
2 Champagne Drive  
Toronto, Ontario CANADA M3J 2C5  
T: 416.635.8030 F: 416.635.6588  
[www.formglas.com](http://www.formglas.com) enquiries@formglas.com
- 1.6 **Samples and Submittals:**
  1. Submit 2 - 200mm x 250mm (8" x 10") flat QC® sample tablets of each color indicated. The tablets are for general appearance comparison only, since color variations will occur within and between units.
  2. Submit shop drawings for approval showing lay-out, sections, details, reinforcing, fastening methods, color references and the QC® relationship to the surrounding construction.

2. PRODUCTS:

2.1 Materials:

1. QuarryCast® molded stone units are manufactured with:
  - a. Integral pigmented neutral calcium sulphate based cements, aggregates and glassfiber reinforcing - no asbestos is permitted.
  - b. Factory applied clear (non-gloss) sealer.
  - c. "Built-in reinforcing ribs where required by the manufacturer for attachment or strength.
2. QuarryCast® matching grout - available from Formglas Inc.
3. Fasteners - supplied by installer.
4. Adhesive - supplied by installer. Adhesive to be PL.400 Chemrex or equivalent. Other adhesives may leach through.

2.2 Tolerances – Fabrication:

	Moldings, etc	"Veneer"
Dimensional - length or width	+/- 4.8mm (+/- 3/16")	+/- .8mm (+/- 1/32")
Thickness	-1.6mm to +4.8mm (1/6" to +3/16")	+/- 1.6mm (+/- 1/16")
Warpage/Bowing, out of plane	2.4mm per 304.8mm (3/32" - ft)	2.4mm per 300.8mm (3/32" - ft.)

2.3 Physical Properties:

Thickness shell - minimum	4.8mm - 9.5mm (3/16" - 3/8")	7.9mm (5/16"
Thickness - with localized reinforcing	19mm - 31.8mm (3/4" - 1 1/4")	n/a
Weight depending on reinforcing	14.6kg - 24.4kg/m <sup>2</sup> (3-5 lb/sq.ft)	9.8kg/m <sup>2</sup> (2 lb/sq.ft.)
Density approx	463.8kg/m <sup>3</sup> (95 lb/cu.ft.)	7862 kPa (1140 psi)
Tensile strength	7862 kPa (1140 psi)	1800 kg/m <sup>3</sup>
Bending strength	5517 kPa (800 psi)	5517 kPa (800 psi)
Compressive strength	21379 kPa (3100 psi)	21379 kPa (3100 psi)
Impact strength - ft/lb/inch (IZOD Test)	4.9/11.6	4.9/11.6
Rockwell Hardness "R"	30 average	30 average
Flame Spread & Fuel Contrib. A.S.T.M. E 84-80	0	0
Smoke Index A.S.T.M. E 84-80	0	0

## 2.4 Color

Texture and color shading variations will occur between parts. DO NOT try to match shadings in specific areas. Mix varying parts at random.

## 3. EXECUTION:

### 3.1 Storage and Handling

1. Store QC® units level on a clean and dry surface in an area protected from weather and damage. Do not "lean" the unit since warpage may occur.

### 3.2 Pre-Installation Responsibility

1. It is the installer's responsibility to order the correct material quantities (including a waste allowance) and he shall verify dimensions and conditions for inclusion into the shop drawings.
2. Ensure that the substrate or back-up is straight and true.
3. For "Veneer" Panels, ensure the (primed drywall or plywood) substrate allows for 10mm (3/8") thickness - 8mm (5/16") panels + 1.6mm (1/16") adhesive.

### 3.3 Installation

#### 3.3 General

1. Part thicknesses may vary (other than "Veneer"). Allow for shim spaces between the QC® and the back-up or substrate.
2. Columns, moldings, etc. are to be face fastened with countersunk screws that are grout filled after. Veneer is adhered to the substrate.
3. Some warpage may occur due to climatic or storage conditions. Carefully wet the back only with a brush and water and bend the part back into the required shape during fastening. "Over wetting" may stain the surface. Contact Formglas Inc. if warpage is excessive.

### 3.3 Layout

#### 3.3. Cutting

1. Unless noted, QC® parts come in standard sizes only. Field cutting and mitering will be required.
2. (There is no grain to - Natural Finish - "Veneer" panels. They can be field cut vertically or horizontally to minimize waste).
3. When pre-made corners for moldings are not supplied, use a miter box.  
The following tools are recommended:

- 4a. Table, cut-off or radial arm saw with diamond saw or "Metal cutting" (abrasive) wheel - i.e. Makita 305mm (12") - A.01345. Carbide tipped blades work well but "dull" quicker.
- 4b. Sawzall with tungsten carbide blade - i.e. Milwaukee #4800 - 1420.
- 4c. Mini-grinder with 102mm (4") dia. diamond cutting saw.
- 4d. ("Veneer" panels can be cut with a Richard Plastic Laminate Cutter (hand tool) if "cutting" dust poses a problem. Score the panel face and back various times and snap (break) the panel along a straight edge. The panel edge will be rough and requires sanding after.)
5. "Wet" cutting is not to be attempted.

### 3.3 Edge Finishing after cutting

1. Sand "cut" edges on moldings etc. with a sanding block or mini sander (#36 grit).
2. For "Veneer" panels, use a sanding block (#40 - #60 grit), to obtain a similar 45° bevel as on the factory edges.

### 3.3 Installation and Attachments

1. Moldings, Custom Panels, Columns, etc.
  - a. With carbide bits, drill & countersink holes - at the "built in" plywood ribs and fasten with No. 8 or similar screws. Countersink the screws about 3mm below the surface for filling after.
  - b. Where required, use joint spacers described under grouting, etc.
2. "Veneer" Panels
  - a. Apply walnut size dabs of adhesive on the panel back on approx. 229mm (9") o.c., and slide into position.
  - b. To hold the panels temporarily in position and flat. Use an "Air Nail Gun" with 18 ga. nails for plywood.
  - c. Premade outside 90° "Veneer" corners can be supplied. Other outside corners shall be field mitered, grouted and "bevel" sanded as per "Installation Instruction" sketches. Sharp outside corners should not be attempted, inside corners can be butt jointed).

### 3.4 Joint Treatment, Grouting, Patching & Fixing

**WARNING: USE THE QC® MATCHING GROUT SPARINGLY. APPLYING OR SMEARING THE GROUT ON THE QC® SURFACE BEYOND THE HOLES OR JOINTS WILL CHANGE THE SURFACE NOTICEABLY AND SPOIL THE OVERALL APPEARANCE!**

**DO NOT USE DRYWALL TAPING TECHNIQUES OR A TROWEL.**

### 3.5 Joint Treatments

1. Dry Joints - Butt the QC® units and leave joints dry.

2. Grouted Joints - (QC® matching grout for moldings, columns, etc.)
  - a. Install 1.6mm - 3mm (1/16" - 1/8") wide spacers in joints to establish a constant width and apply masking tape to either side of joint.
  - b. Finger fill the joints and "Tool" the grouted joint i.e. with a 5mm (3/16") dia. rod (drill bit shaft) to obtain a half-round set back - sealing is not required. **DO NOT ATTEMPT "FLUSH JOINTS"**.
  - c. If the grout is smeared accidentally beyond the joint, remove immediately with a damp cloth or flexible scraper. If the grout smear has dried, sand lightly with #180 - #220 sandpaper and remove dust with a damp cloth.
  - d. "Veneer" Panel joints should never be grouted.
  - e. Caulk between QC® and dissimilar materials unless dry joints are preferred.

### 3. Caulked Joints

- a. Most available caulking compounds are compatible.

### 4. Recommendations

- a. DO NOT try to give the QC® installation a continuous look. Joints cannot be hidden.
- b. DO NOT attempt to obtain a level appearance by grout-filling mis-aligned parts.
- c. (If wide joints are required at Veneer panels, use plastic laminate strips or caulk these wide/spaced joints. DO NOT try to grout these joints and do not try to paint the substrate).

### 3.4 Hole Filling

1. Finger fill holes with matching grout and remove excess grout immediately with a flexible scraper or damp cloth. The grout will blend in after approx. 24 hours.  
**DO NOT SMEAR THE GROUT ON THE QC® SURFACE BEYOND THE HOLE.**

### 3.4 Patching

1. Broken Corners: Refit dry or re-attach with (clear) wood glue.
2. Large Cracks & Chips: Fill as described in "Hole Filling" above. Use grout sparingly.
3. Scratches and Gouges: Because of the QC® texture, superficial scratches will not detract from the general appearance.
  - a. Deep scratches or gouges can be "hand sanded" out with #80 - #100 sandpaper and coated after with the clear sealer (available from Formglas Inc.)

OR

- b. Fill with matching grout as described in "Hole Filling" above - Use grout sparingly.
4. Note: All QC® is factory finished with (non-gloss) clear sealer that does not change the color but makes it easily cleanable.

### 3.5 Cleaning & Maintenance

1. QuarryCast® requires generally little upkeep other than cleaning with a water / soap solution and rinsing with a sponge.
2. Excessive dirt, pencil and rubber marks etc. can be removed with a multi-purpose spray cleaner such as "Spray Nine" by Knight's (518) 762-4591 (no powders) and wiping after with a damp cloth or sponge. If the area is large it will require resealing.
3. To remove stains, burns etc. contact Formglas Inc.

NOTE 1: QuarryCast® may deteriorate with prolonged exposure to the elements. Damp cleaning will not damage the material, but it should not be used in exterior applications.

NOTE 2: As with real stone and marble, hairline cracks may appear in the grouted joints due to thermal or structural movement. This is especially the case when grouting (not recommended) is used between QuarryCast® and dissimilar materials.