Premium Natural™ QUARTZ

From MSI

INSTALLATION GUIDELINES

⚠ **WARNING:** This product can expose you to chemicals including crystalline silica which is known to the State of California to cause cancer. *For more information go to www.P65Warnings.ca.gov.*

CAUTION: SILICA DUST IS HARMFUL IF INHALED: Exposure to silica dust from cutting, grinding, or polishing can cause acute lung injury, silicosis, or cancer. Wear a respirator when cutting, grinding, or polishing. Use wet cutting methods and do not dry cut. Children should not be present during cutting, grinding, or polishing.

It is strongly recommend that Q Quartz slabs are stored indoors and allowed to acclimate for a minimum of 48 hours before fabrication. There is a higher risk of breakage during winter months if slabs are not acclimated and exposed to the stresses from cutting.

Inspection: Remove the plastic sheet from the slab before cutting. Clean and examine the slab in direct light for:

- Chips, cracks, and voids
- Variance in Gloss levels
- Manufacturing flaws/defects
- Color match/Shade Variation
- Foreign objects such as metals, wood, etc.

DO NOT CUT THE MATERIAL if you cannot cut around the problematic area. Instead, return the slab to your distributor or save it for a future project.

Color Consistency:

Q Quartz is made from pure, natural Quartz. Variation in quartz, color, shape, shade, pattern and size are unique attributes of Q Quartz. Although Q Quartz colors may be more consistent than granite, color variance is an inherent trait expected of Q Quartz. In addition small botches or random distribution of particulates are an inherent part of the overall design and composition and are not considered to be defects or product non- conformity. Our Residential lifetime warranty and Commercial 10 year warranty does not cover color variance and Q Quartz will not be replaced for the unique, inherent traits of Q Quartz.

Further design samples are a small select cut from the slab and they do not full exhibit all the design characteristics of the final installed product.

In addition to this Q Quartz is not a seamless product; seams are visible. Where there are seams the product pattern and shade will change.

To avoid color inconsistency, it is essential to check for color match during visual slab inspection. It is very normal for Quartz slabs to have slight color variation between production cycles due to the complex blending of natural minerals. MSI recommends to follow the strict guidelines below to ensure color consistency:

MSI Lot# & Bundle#
MSI Slab Sticker Identification:

Every Q Quartz slab comes with the Lot# and Bundle#

sticker applied on the slab edge at the time of shipment to the fabricator. Color consistency will be most accurate for slabs with both the same lot# and the same bundle#. Typically a bundle has approximately 10 slabs. While Q Premium Natural Quartz is manufactured using modern technology, given natural variation in both quartz and the pigments mixed within the resin, there is no guarantee that slabs with both the same lot and bundle # will match in color. For jobs that require multiple slabs or have seams we highly recommend the fabricator conduct a visual inspection of the slabs to confirm color consistency prior to fabrication. Absolutely no credits, warranty, or liability will be accepted for slabs not matching, even if they are from the same lot and bundle.

FABRICATION:

• Wear a respirator when cutting, grinding, or polishing. Use wet cutting methods and do not dry cut. Children should not be present during cutting, grinding, or polishing.

• All corners on the countertop must be rounded to a minimum 3/8" radius. This includes sinks, cooktops, L-shaped counters, window ledges, etc. It is not necessary to round on L-Shaped counters where the seams fall at the corners.

• Include an allowance of an extra 1/8" between the cooktop/sink and the edge of the cutout for expansion.

• Do not cross cut Q+ surfaces. Always use a diamond core bit to create a radius when preparing a cutout.

• When using a bridge saw, never plunge cut.

• Damage to the drilled area can result in stress points that may lead to hairline cracks

• Avoid generating excessive heat, all cuts should be done using only wet diamond cutting tools.

LAMINATION:

Grind away any waves or indentations to an even finish on lamination areas for edge detail. Then make grooves and notches on each piece of the build-up. The notches give space for the glue. (Q is non-porous and will not absorb the glue)

Clean the material with alcohol and remove excess material with a wet cleaning method before gluing it together.

To achieve a minimally visible seam, the adhesive being used must be pigmented to a color that is similar to that of the material that is being installed.

EDGE POLISHING GUIDELINES FOR Q+

Diamond polishing pads (wet pads only). Preferred grits for fabrication are 50, 100, 200, 400, 600, 800, 1500, 3000.

We recommend using only white resin pads for all applications, whether hand polishing, or using an automatic edge polisher or a CNC machine. Do not use polishing pads that have colored resin. While such pads can work well with natural stone materials, they require an excessive amount of water and can transfer the resin's color to the edges of the Q+ material.

1. Rigid Backer Pads: Flexible backers work well for concave profile edges, such as ogee edges. The need to use a flexible backer on most other profiles is not needed. Keep in mind automatic edge machines all use extremely rigid polishing tools and backer pads; these machines will produce a far better edge than what many fabricators can do by hand.

2. Polishing Pads: Common problems include both using too much water and not enough water, and not using the proper polishing technique. The Sequence of grits shown above for polished finish are guidelines for achieving a polish relatively equal to the factory finish.

3. When too much water is used while applying pressure to the center of the pad, the water gets trapped in between the pad and the stone, causing a hydroplaning effect. This causes the water to escape to the outer edges of the pad, making it difficult for the polishing pad to effectively polish the edge or edge's surface. This will result in a spotty polish.

4. When too little water is used, the polishing pads tend to flex or cup outwards around the center of the pad (mainly with higher grits). This causes the outer edges of the polishing pad to touch the surface, but will not allow the center of pad to polish. The tendency is to apply more pressure, which also leaves a spotty polish.

5. When polishing the edge detail on Q+, be sure to use the entire polishing pad surface, which is stated in the tips below. When polishing any bullnose edge, it is important to use the center of the pad only as it will give the proper water distribution for the pad and the stone.

6. Never use a final buffing pad for Q+. These come in black and buff and contain different chemicals and no diamonds and are meant to bring granite to a high polish. The final step for polishing Q+ is to use a grit level of 3000.

7. Dry polishing the edge profile may cause overheating of Q+. Excessive heat to the stone can alter the physical properties of the slab which can cause micro-fissures not visible to the naked eye. This can lead to chipping, discoloration and a poor, uneven polish. Never use dry polishing pads on Q+.

After polishing the top edge of the miter after gluing has been completed, we recommend the following steps;

1. Begin the process with a 400 polishing pad applying very light pressure on the tool.

2. Repeat this process with a 600 polishing pad, again applying very light pressure on the tool.

3. Fabricators who routinely work with porcelain or sintered stone products typically must exert a much higher degree of pressure on the tool due to the extreme hardness of the materials they are polishing. If this process is adhered to, the visible line that appears at the transition from the top surface to edge in Q+ will be much less visible than the typical result you would see in either a porcelain or sintered stone slab.

NOTE: Q+ should never be polished on the top surface of the manufacturing finish as it will remove the print on surface.

Air/Electric Polisher RPM: The rpm for all air/electric polishers should be between 2,800- 4,000. It is best to start at 2,800 rpm and increase as needed. Anything over 4,000 rpm could result in burning or smearing the resin on your edge detail. This is where the color of the resin on the polishing pad makes a big difference. If the edge is burned with a white resin polishing pad, it can be easily removed with denatured alcohol. However, the dye in colored resin polishing pads can create a major problem when working with white, translucent Q+.

INSTALLATION MANDATORY PROCEDURES

- Tops of cabinets must be flat and true to within 1/16" per 18" length prior to installation.
- Allow a minimum clearance of 1/8" between walls and Q.
- Never insert mechanical fasteners, such as nails and screws, into Q.
- Provide perimeter support of full deck. Front to back support must be given every 24". Use only dabs of flexible 100% silicone 8-12" apart to fasten tops of Q to the perimeter support.
- Grooves must be made on the edges of seams in order to provide space for the adhesive.
- Radius all inside corners for U-shaped and L-shaped tops in order to lessen corner stresses to a minimum diameter of 3/8".
- The recommended minimum edge profile is a 1/8" bevel. The preferred minimum edge profile is a 1/8" Pencil Round edge.
- Extra adhesive should be placed on all corners along all joints.
- Support is needed for overhangs of Q that extend more than 3/4" material, 16" in 1-1/4" material.
- Seams should be made using a pre-mixed cartridge adhesive, which can either be acrylic or a two-part epoxy system.
- All sinks must be sealed to the countertop using 100% silicone.
- Always follow the sink manufacturer's recommendations in regards to sink installation. Some sinks may require specific support systems which will be specified in the sink manufacturer's guidelines.
- When installing Q+ as a backsplash behind a gas, induction, or any other cooktop type, install the cooktops according to the manufacturer's instructions, paying special attention to insulation and spacing requirements.

VERTICAL APPLICATION GUIDELINES

The installation of vertical Q+ panels varies from location to location. Check with your local building codes. When designing and installing vertical panels and cladding, it is necessary to take the weight of the product into account and the services of an experienced structural engineer should be sought during the designing and installation phases.

1. Measure for any cutouts required on the water line wall of the shower. This is the wall with the Tub Diverter, Bathtub Faucet and the Shower head. Use a tape measure to determine where you need to cut holes in the Q+ slab for the pipe cut-outs. Mark the slab and use the diamond core bit to cut out the necessary holes. Allow a ½" clearance around all pipe cutouts.

2. Install the front and back slabs first before you install the side pieces. Apply a setting epoxy adhesive to the back of the slab that you are adhering to the wall. Use a ¼" notched trowel to spread the setting epoxy onto the back of the slab. This may require more than one person for the heavier/larger slabs. Maneuver the slab into position. Place it firmly against the following substrates: Cement board, Waterproofed plywood or existing Backer board on the walls. (if using existing backer board make sure it is free of any defects)

3. Apply firm pressure and move the slab up and down and side to side as much as you can to force the epoxy glue to completely bond with the wall/substrate behind and the slab itself. Once finished, allow the slab to come to its final resting place on top of the shower pan. Provide a minimum of 1/8" expansion joint (to be caulked with 100% silicone) at the bottom/ top of the slabs, which would be the shower pan and ceiling. Use 1/8" shims at the top and bottom of slabs to get the proper spacing for expansion joints. Repeat the process with all other wall panels that are needed to finish the wall surround.

4. Epoxy or "hard" seams are not recommended for vertical wall applications. All corners should be caulked with 100% silicone caulk. Allow 1/8" minimum expansion joint between adjacent Q+ slabs. Use 1/8" shims between the adjacent slabs to get the proper spacing for expansion joints.

5. Apply the proper braces to support the wall panel until setting epoxy adhesive is completely cured. Keep the braces in place for at least 24 hours or according to the drying time on your setting epoxy adhesive.

6. Remove the braces. Apply silicone caulking to the inside corners and fill the gaps between the slabs. Also, silicone the area where the slabs meet the shower pan and ceiling. Allow the caulking to dry for 72 hours before using the shower.

7. If using Q+ as a backsplash please insure that that there is proper spacing between the back of the hob or range-top and vertical Q+ backsplash. Some range-tops will have a distance recommended by their manufacturer in their installation guidelines. We recommend a spacing of at least 3” from the backsplash to the back of the range top to avoid heat damage to the backsplash.

FIREPLACE APPLICATION

Q Quartz under the Standard Test Method for Surface Burning Characteristics of Building Materials (is classified as Class A). A detail test report is available on our website at www.QfromMSI.com

FIREPLACE INSTALLATION GUIDELINES:

1. Quartz surfaces can be affected and damaged by sudden and rapid change of temperature and may not withstand the transfer of heat.
2. Quartz material should never be used as structural support in an installation. Installer must confirm that adequate structural support exists
3. All the designs must allow for thermal expansion and contraction
4. Applicable local building code requirements for all applications should be followed for building materials and surface finish
5) Check fireplace manufacturer requirements for all applications to verify any specific or special requirements
6) Appropriate clearance between quartz and surrounding walls, cabinets and structure should be maintained; Minimum of 1/8" clearance
7) Quartz should **never** be in direct contact with the firebox or any surface that may exceed 200°

OVERHANGS

As a general guideline, support is required for overhangs. The following guidelines are for standard cabinets 24" depth:

MATERIAL SUPPORT REQUIRED	2CM (¾")	2CM (¾") with 5⁄8" sub-top
No additional support required.	Under 8"	Under 12"
Brackets required at 24" (600mm) intervals.	Between 8–16"	Between 12–20"
Legs, Columns or Panels required at 24" (600mm) intervals.	Over 16"	Over 24"

Disclaimer: *This information is intended to be used by qualified individuals who have a working knowledge and skill of a technical application and well versed with fabrication and are responsible for Quality, workmanship, safety and reliability of their work. M S International, Inc does not assume any responsibility for design, safety or workmanship of the installation.*