

squak mountain stone

NATURAL BEAUTY, REDEFINED

FABRICATING AND INSTALLING



DISCLAIMER

This guide is not intended to be a replacement for competency and skill in construction. Squak Mountain Stone™ should be installed only by qualified, skilled persons, whether they are professional or do-it-yourselfer, who are capable of following safety precautions and have the strength to carry and safely transport these very heavy slabs of stone.



This slab broke from lack of experience.

The following guidelines are intended to familiarize qualified installers and contractors with the specific characteristics and considerations for Squak Mountain Stone.™

It is not a substitute for hiring a competent professional installer.

Squak Mountain Stone is heavy yet can be broken if not handled properly. These two items alone can result in injury if someone is not familiar with installing such materials. The tools necessary to install Squak Mountain Stone are also of a dangerous nature and should not be used by persons unfamiliar with their operations and the necessary safety precautions for them.

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START SAFELY



This is a respirator with filters for fine dust. N95 dust masks are typically also acceptable for protection from airborne RCS.

Modifying or finishing Squak Mountain Stone™ may result in producing RCS (respirable crystalline silica), a known carcinogen present in cement, sand and granite products. When working with Squak Mountain Stone, installers should comply with all OSHA regulations and protect themselves from breathing in the dust. Use NIOSH approved dust masks and also find means to control the production of dust through exhaust at the source or water-suppression. Also, good housekeeping and hygiene will control the spread of dust possibly containing RCS in the buildings and homes of customers.

NOTE: Squak Mountain Stone products contain less than 1% crystalline silica.



A shop vac hose is held at the saw to keep the dust down.



This right angle grinder has a Dust Muzzle attached to it that uses a shop vac to pull dust up as its generated, keeping the air clear and eliminating the need to for personal dust masks. Saw Muzzles are also available for circular saws. See www.dustmuzzle.com for more products.

FABRICATION

It is recommended that cutting openings for sinks and faucets be started on the top surface as chipping may occur when the hole saw reaches the bottom of the cut.

Water cutting is not recommended for cutting Squak Mountain Stone. Please note if using water cutting tools that you should make sure the slab has dried out sufficiently before installing it. **WARNING:** If the slabs are still damp when installed, they may leave "moisture shadows" when objects are left on the counters as the excess moisture is trying to leave the slab the through the least-path-of resistance: the top. These shadows may be removed or disguised with polishing but its best to avoid them altogether. The incidence of these shadows will lessen over time as the moisture evaporates. Depending on weather conditions and the amount of water used to do water cutting, it may take several days for the slabs to dry out. If speed is a factor for installation, dry cutting is the best way to go. Also, during the fabrication process, if the slabs are moist or damp, stencils left on the surfaces for more than 30 minutes can also create shadows as the moisture is trying to leave the slabs.

More expensive does not always mean better. Great success has been had with less expensive saw blades while some high-end blades have performed poorly.

For cutting tiles, a standard tile saw can be used for the 12"x12" tiles, but the subway tiles can also be scored with a file along the top and bottom of the tile then gently tapped with a hammer & snapped.



An inexpensive continuous-rim dry masonry blade works great for cutting Squak.

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FABRICATION (CON'T)



This sink opening was cut out using a plunging router with a carbide router bit. Because of the relative hardness of Squak, the bit will likely be ruined after the job.

There should be at least 1-1/4" to 2-1/2" between faucet voids and the edges of the countertop and sink and any other openings

Very little polishing and finishing is necessary with Squak Mountain Stone. The main surfaces of the slabs are already honed and pre-sealed in the shop before they are shipped out. The only areas that require any further finishing are any cut edges that will be exposed. Because Squak is a honed surface instead of polished, finishing cut sections to match the factory surface is fairly easy and straightforward.

Using silica carbide or diamond resin pads on an angle grinder, orbital sander or drum sander can remove saw marks. Any paper present at the edges will typically rub off during sanding. Hand sanding pads (100 grit) are recommended for easing edges and corners or for smoothing out rough spots on the top surface and chips.



This curved corner was cut using a high-quality jig-saw and wood blades with 9 teeth per inch. The edge is then sanding smooth with a 100 grit sand paper .



*Using a similar blade as seen on the circular saw, this grinder with a 4" blade is used to trim a slab onsite when an unforeseen obstruction gets in the way of the slab. In some cases, trimming away the drywall might prove just as effective and easier, especially if it will be hidden by a backsplash. **NOTE:** The safety shield has been removed for demonstration purposes only!*



This cut edge was polished with a 100 grit sanding pad. Note that the paper that is cut and exposed sands smooth with the rest of the surface. Molded edges can be sanded to match an exposed cut edge, if necessary.

Wonder about doing bull-nosed edges? It is possible. Using a router with a carbide round-over bit can be done but great care should be taken when coming upon corners as the material may chip off if the router is used to aggressively at those points. Hand sanding the edges can leave a nice smooth, rounded edge just as easily and with less potential for damage. However, it is actually recommended that the edges don't receive too much treatment. First, it will remove the original surface character and result in the edges looking very different from the top. But also because it will make them harder to disguise the inevitable wear and tear when the smooth rounded edges get a chip.

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INSTALLATION



This slab is being dry-fit to make sure its been cut properly before it is attached to the cabinets. These installers are taking great care to not roll or slide the slab over on its edge, which might chip the stone.

use padding if its necessary to rest the slabs on their

Squak Mountain Stone can be attached to cabinets using a construction adhesive unless seismic codes dictate otherwise. However, if screws are used, they should be used in conjunction with lag shields or mollies, inserted with a small amount of epoxy to help ensure a good, tight bond with the product. Tiles may be affixed with thinset mortar or tile adhesive, as required by the specific installation.

Nothing should be hung or suspended from the slabs. Therefore, for under mount sinks, a substrate should be used to support the sink instead of attaching sink to underside of countertop.

Squak Mountain Stone™ products should **not** be used as the sole structural support for cabinets, fixtures, appliances, or other elements. Use a substrate or bracing for mounting dishwashers, drop in stoves, etc. into Squak Mountain Stone™.

Unsupported cantilevers should not exceed 12".

Never carry the slabs flat if they have any openings cut out of them as they may break. Always carry them on their edge. And remember as you move the slabs around: the edges of the slabs are fragile! Always use padding if its necessary to rest the slabs on their edges. Never rock the slabs over on the edges, as this may chip them.

Un-level Surfaces

Most countertops are made up of two or more sections due to the standard sizing of Squak products. Each piece of Squak Mountain Stone is cast individually, so there could be a variance in depths of up to 1/8". Also, as the pieces cure, some slight curling or deflections can happen. Any shape change that exceeds 1/8" is pulled from stock but anything 1/8" or less is crated and sold. It is truly impossible to remove all imperfections in hand-made, hand cast products, so we try to limit them to as minor as possible. Therefore it's always important to plan for some adjustments and to keep shims on hand. Try to use plastic shims instead of wood, because the ever present moisture in the slabs could rot out the wood shims. Or, if using a substrate, take metal screws, and drill them up through the underside of the substrate. Turn the screws slowly until they raise the piece up to the desired level. And make sure the slabs are even supported and not resting on one screw or shim, to help avoid cracking from excessive weight on the counter.



Construction adhesive is used here to attach the slab to the cabinets. For a semi-permanent installation, silicone can also be used. Check local seismic codes for whether or not screws will also have to be used.



These installers are carrying the Squak slab they fabricated in their shop on its edge, taking care to support the sink opening, to keep the slab from cracking. Most Squak installations require at least (2) people for proper and safe handling of the material.

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INSTALLATION (CON'T)

Seaming

The easiest way to get durable seams is to use a color-matched fortified tile grout. Don't apply the grout AFTER the slabs are seamed together as it will increase the likelihood that it will shrink into the gap between the slab. You should butter up the edges of the slabs with grout the full height right before pushing the pieces together. Then simply smooth away any excess material that squeezes out the top of the joint using a wet sponge. Because the grout completely fills the joint, top to bottom, it's less apt to shrink and sink. You can use pre-mixed tile grout, grout-caulk, or fortified dry grout, mixed with water or acrylic additives. It is important to match the grout color to the slab color if you want "invisible seams". You will be able to find pre-colored grouts that match the standard Squak colors at any local tile supply store in a dry mix that you can keep and mix up when you need it or you can, through some trial and error, mix your own on site, using a bone or antique white base grout with liquid pigments.

	Custom Building Products Grouts	MAPEI Grouts	LatiCrete & Lata-Poxy Grouts
Natural	Bone	Mist	Light Pewter
Thunder	Dove Gray	Pearl Gray (light sections) Black (darker sections)	Raven
Latte	Fawn	Harvest	Toasted Almond
Otter	Earth	Mocha	Chocolate Truffle
Quinault	Bay Leaf	<i>No Match</i>	<i>No Match</i>

Sealing

The slabs and 12"x12" tiles are pre-sealed with a stain-resistant sealer but a final finish of sealer or food-grade countertop wax will have to be applied immediately after installation and maintained to provide a nice finish and on-going stain resistance. Also, if you cut or finish the edges of the slabs, they will be lighter in color than the pre-sealed portions and for aesthetic purposes, will want to have a coat of sealer applied to them, to help them match the rest of the countertop.

For all cuts and any cut-outs that are exposed to moisture, such as the area around undermount sinks, more sealer will have to be applied. The **Top Coat** sealer supplied by Tiger Mountain Innovations or any water-based topical sealer is recommended. The subway tiles are pre-sealed with a penetrating pre-grout sealer to help prevent staining during installation. This pre-grout sealer may have to be stripped away if a penetrating sealer is to be applied after installation.

Repairing the Acrylic Sealer

Use a fine grit (150-200) sanding pad to buff out the marks on the sealed surface. This will remove any loose sealer and help distort or removed the damaged area, helping it blend in.

Using a sponge, wipe on (2) light coats of Top Coat sealer. **DO NOT LET IT PUDDLE.** Stop when sealer gets "tacky." Once first coat is dry to touch (about 10-15 minutes, depending on temperature and humidity), wipe on a lighter second coat. Work in the excess again with the sponge. Let dry for at least 1 hour. Sealer is cured in 24 hours.

Chipping

Resist the temptation to restore a chipped out section—it will never match. If you have chipped a section of the countertop, first, simply sand the area smooth with 100 grit sand paper. Using some un-sanded fortified tile grout from your seaming, work some grout into the chip with your finger so that it hides the exposed area and blends in with the other undulations in the surface of the stone. After grout cures, seal the area. **In 2007, look for a new patch & repair kit for color-matching & blending your own mix to hide chips & holes.*



A plywood substrate is used over the dishwasher and the sink cabinet. Note that the substrate is inset flush with the tops of the cabinets, to avoid an reveal formed by the plywood sitting on top of the cabinets. The plywood is supported underneath by corbel-type bracing.

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FINAL TOUCHES

Air pockets or holes may be present after cutting the product where the holes may not be desirable or the product may get chipped during installation. These holes and chips can be filled with a fortified grout (not supplied by TMI) or a tinted grout-caulk, available from some Squak Dealers or at tile stores. Epoxy fillers are difficult to match to Squak Mountain Stone and really should be avoided. Pin holes that materialize on the surface from wear & tear can also be filled in with a small amount of tinted un-sanded grout, available at most home improvement or tile supply stores.

Holes in the tiles can be filled during the grouting process by working the grout in across the surface of the tiles as well as the joints.



A piece of wood trim, painted to match the cabinets, is used to conceal the plywood substrate. Other treatment options are paint or metal trim.



Undermount sink openings can have small air holes, formed during casting. These can be filled in and the edges should be sealed.



Worm holes in the surface of this tile were filled in by the grout when the joints were done.



Masking tape is used to protect the slab from the pad of the saw as this piece is being cut. However, masking tape can also pull up some of the shop-applied sealer and should be repaired and resealed before the counters are used.

Masking Tape Warning!

Masking tapes are used quite often in installation to protect surfaces and to hold down other protective materials but it has been found that certain types of masking tape can actually pull up the acrylic finish on Squak Mountain Stone™.

Please avoid the use of 3M's #2090 14-Day Release tape. Testing has found it to do the most damage the Squak's acrylic sealer. If taping is necessary, TMI recommends Intertape's Pro-Mask 14 Day release product.

If masking tape has been used and some damage is noted (a tape print left on the surface, area darkens when wiped with a wet towel or sponge), simply lightly sand the area to remove any loose acrylic sealer and wipe on two light coats of **Top Coat** to repair and reseal the area.