

Fabrication Bulletin # 2003

12mm HanStone Fabrication

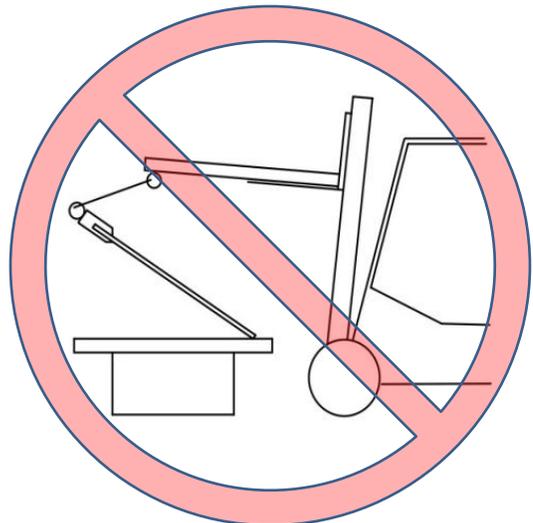
HanStone Quartz offers the natural beauty of quartz with up to six times the strength and durability of granite. More than 90% of HanStone Quartz is mined quartz crystals, one of nature's hardest minerals. The quartz is combined with resins and pigment to create the look of natural stone without the high maintenance. There is no need for sealing, conditioning, and polishing. HanStone Quartz is scratch and stain resistant and its non-porous nature makes it an ideal surface for residential or commercial applications.

Hanwha produces a select offering of material in 12mm (½" nominal) thickness. This material lends itself well to a variety of vertical applications including wet walls and wainscot. Although a positive mechanical anchor is always preferred, most vertical applications can be adhered using 100% silicone sealant. This bulletin is supplemental to the HanStone Fabrication Manual, and does not replace it.

Also note that there are a large number of variables in the fabrication process that can affect the final outcome and potentially result in damage to the material. Some of these variables are; slab handling methods, level cutting bed or table, type and condition of saw blade, cutting feed rate, pressure (waterjet) spindle speed (RPM's), volume and placement of coolant (water), and geometry of cutting. All of these variables can have an impact on cutting HanStone quartz slabs and eliminating damage. Please also refer to Fabrication Bulletin #2002 for additional information on sawing and cutting best practices.

Handling

- Handle slabs individually or two at a time using lifting clamps whenever possible.
- Transport and handle all pieces vertically whenever possible.
- Use A-frames or storage fixtures with a minimum of 3 vertical support legs.
- Use a tilt bed, suction lifter, or other means to transfer slabs from a horizontal to vertical position. Do not lay down a slab using only a lifting clamp and no support.
- Protect all corners and edges during handling and transport. Handle with care as 12mm product is more fragile than 2cm or 3cm HanStone.

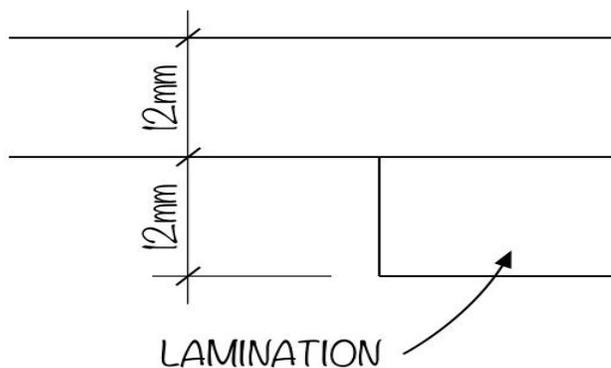


Fabrication

12mm HanStone should be fabricated similar to 2cm material. Special care is required in handling pieces during the fabrication process. Sawing feed rates should be only slightly faster than 2cm HanStone. Cutting, grinding, profiling, and polishing should all be done similar to, and using the same techniques as 2cm HanStone. The main difference in using 12mm HanStone is to provide added support during fabrication and handling. Please refer to the HanStone Fabrication Manual for additional and supplemental information.

Laminated Edges

Laminated edges can be used with 12mm HanStone to produce a thicker edge profile when required. This could occur at corners or a transition to a dissimilar material. The laminated edge thickness would be 2.4cm (nominal) or 2 X the 12mm material thickness.



This type of lamination is common in 2cm stone fabrication and should be constructed in a similar manner using the 12mm product.

The lamination strip is attached to the bottom edge of the countertop using an epoxy or polyester resin. The pieces are clamped while curing and the edge can be profiled to various different edge types. Always round over sharp edges or corners.

Cutouts

Cutouts in 12mm HanStone will create a more fragile condition. As the size of the cutout increases the potential for breakage is also increased. This is true during fabrication, handling, installation, and even after the product is installed. Care must be exercised during the entire process to avoid damage to the material. The following guidelines should be used;

- Solidly support the entire piece when making a cutout. For example, do not span across saw horses or other frame type fabrication benches.
- Provide minimum 3/8" radius in all corners.
- Make cutouts from the back of the piece whenever possible.
- Keep all cutout sizes to a minimum.

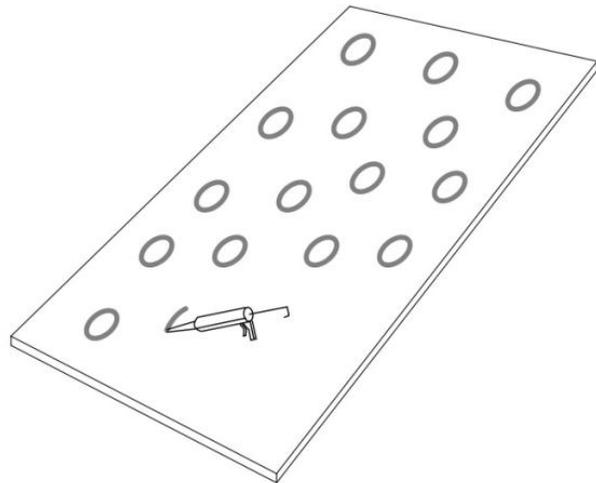
All other cutout requirements as specified in the Fabrication Manual apply as well to 12mm HanStone.

Wall Cladding

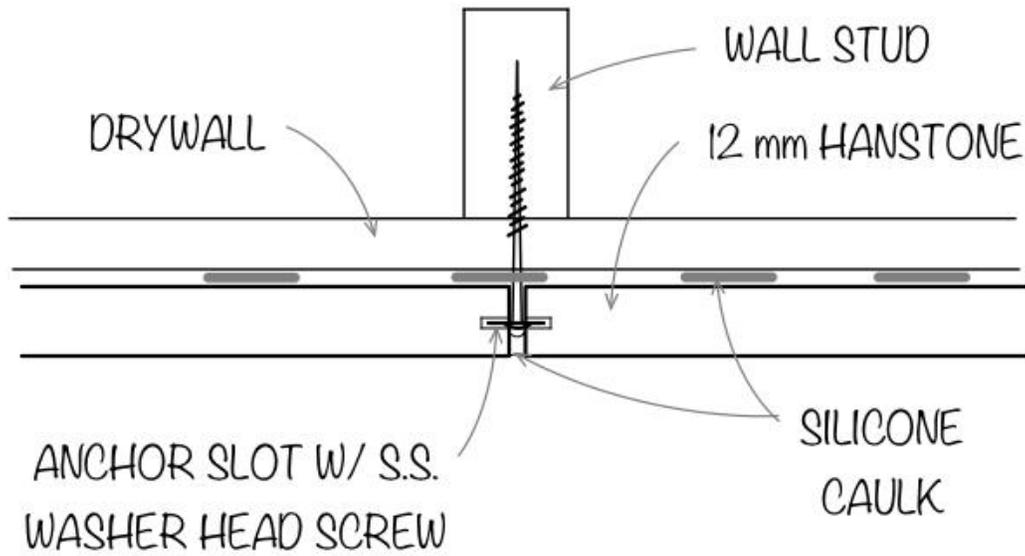
12mm HanStone is ideal for use as wainscot, tub and shower walls, and even as feature walls for commercial applications. HanStone 12mm slabs weigh approximately 5.5 lbs. per sq. ft. The surface that the HanStone panels are being attached to must be level, plumb, and of sound construction to adequately support the 12mm HanStone panels. Do not attach HanStone to any material that contains damage from moisture.

Use 100% silicone sealant to attach 12mm HanStone to the substrate. Make 3" to 4" diameter circles of caulk on the back of the panel. Space these out every 8" to 12" over the entire back of the panel. Adhere the panel to the wall and clamp or support the panel until the silicone cures.

For panes that are taller than wainscot height (approximately 3' tall) use positive anchors in addition to the 100% silicone sealant. A simple detail for a positive anchor can be achieved using "washer-head" screws. In a wet environment such as a tub or shower, always use non-corrosive screws and anchor hardware.



Always use 100% silicone caulking at all joints or seams. Do not hard seam pieces together using epoxy, as this will invariably fail. Provide a 1/8" minimum expansion gap at all seams as well as between HanStone panels and adjacent dissimilar materials. This expansion gap should be filled with 100% silicone sealant. The following detail shows the use of a positive anchor to hold two panels at a vertical joint. Similar details can also be used at the top of panels.



PLAN VIEW - VERTICAL JOINT

Warranty

For all 12mm HanStone slabs Hanwha L&C offers a five (5) year limited warranty covering manufacturing defects. All other warranty terms are as specified in the current standard HanStone limited warranty.