FABRICATION MANUAL

February 2021

HanStone® Quartz

NATURALLY CANADIAN

DISTINCTLY BEAUTIFUL. NATURALLY CANADIAN.

Created by the fusion of exceptional design, superior quartz and cutting-edge technology, HanStone Quartz weaves together intriguing patterns and colours inspired by the diverse Canadian landscape. The go-to choice of designers, architects and homeowners from coast to coast, HanStone Quartz is the next generation of stone surfaces.

INSPIRED BY NATURE
MADE IN CANADA
HANSTONE.CA

FOR MORE INFORMATION VISIT:
HANSTONE.CA

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INTRODUCTION

HanStone Quartz is an innovative new product that combines natural quartz, one of nature's hardest materials, with high quality polymer resin and pigment to produce a durable yet luxurious stone surface. We source various types, sizes and colors of quartz crystals from around the world, which provide the desired hue, feel and design, and capture the spirit and essence of natural colors. Unlike granite and many other surfaces, HanStone Quartz is nonporous and requires no sealing. In addition to being even more durable than granite, HanStone Quartz is also stain-resistant, heat-resistant and easy to maintain. It has also been tested and certified by the National Sanitation for Food Safety and Food Contact under the NSF 51 Certification, and is backed by a Commercial 10-Year Lifetime Warranty and a Residential Lifetime Limited Warranty.

All of these qualities have made HanStone Quartz a premier choice among builders around the world. For homeowners, it's an ideal surface for kitchen countertops, bathroom vanities, bar tops and other surfaces. It's also perfect for high-traffic areas such as offices, banks, hotels and restaurants, where applications can also include walls, reception areas, serving areas, table tops, and much more.

If you're looking for a surface that is safe for food preparation and easy to maintain, yet will maintain its luster and natural beauty, you'll find HanStone Quartz to be the perfect choice!

HANSTONE CANADA

150 Caldari Rd,
Concord, ON L4K 4L1
(905) 660-3770
info@hanstone.ca

APPLICATIONS

HanStone Quartz can be used in a number of design applications, such as kitchen countertops, benches, islands, peninsulas; bathroom vanities, shower walls and niches, bath and tub surrounds; table tops, furniture, mantles, window sills, wall coverings and thresholds, etc.

Commercial uses such as healthcare facilities, restaurants, offices; including conference tables, reception and desktops, countertops and credenzas, lobby/interior walls, food preparation areas, laboratories, and inlays.

HanStone Quartz is not suitable for outdoor or exterior applications, or areas that it will be exposed to direct UV radiation or excessive heat such as fireplaces, using HanStone Quartz in such a way will void the warranty.

MATERIAL INSPECTION CHECKLIST

Upon receiving HanStone Quartz slabs from your distributer, a visual inspection is mandatory before cutting, fabricating, altering, or before permanent installation.

PLEASE REMOVE ALL FILM FROM THE SLABS AND INSPECT THE SURFACE AREA FOR DEFECTS AND/OR COLOUR VARIATION.

Some things to look for are:

- Pattern irregularities
- Blotches/resin blotches/pooling
- Colour variance
- Check lot numbers between multiple slabs (found on label stickers and printed on the back of each slab)
- Cracks/chips/stress marks
- Broken slabs
- Scratches/streaks/swirl marks/dull spots in finish
- Pits or voids on the surface side
- Spots/irregularities
- Foreign material
- Warpage
- Inconsistent finish
- Thickness +/-

NOTE: After checking and performing a quality control inspection of the slab, if you find any Product Non-Conformities (PNC), which will greatly increase your fabrication time and cannot be resolved quickly, please contact your local HanStone Quartz distributor for further instructions.

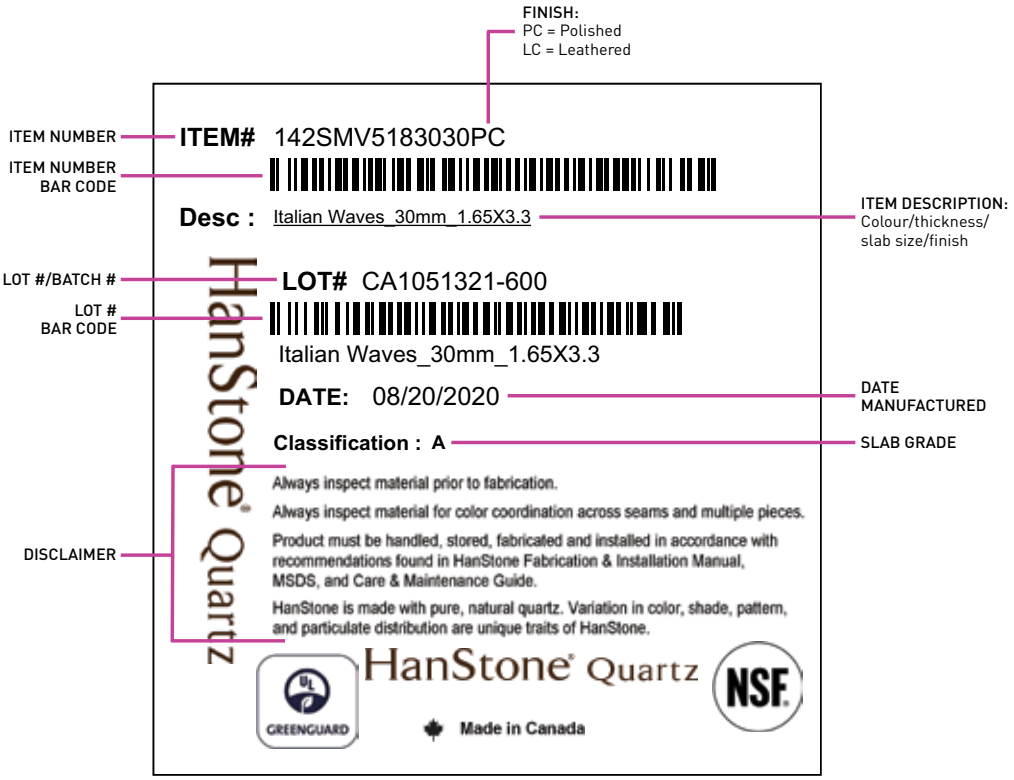
Hyundai L&C will not be held responsible for any labor charges incurred for fabrication of such defective materials or any incidental loss or damages as a result of mishandling. Any PNC issues should be reported to a local HanStone Quartz supplier prior to cutting, fabricating and/or installation. Failure to thoroughly inspect slabs before cutting or modifying in any way will void any opportunity at exchange or warranty claim.

SLAB IDENTIFICATION STICKER

Each HanStone slab has an identification label affixed to either end. If this label is removed, the slab lot number can be found printed on the back of each slab. Before starting, always ensure multiple slabs are from the same lot number. This will help to minimize the chance of colour variation from slab-to-slab. If seaming 2 pieces together, it is strongly recommended to use pieces from the same lot number as close to consecutively as possible.

HanStone also recommends always doing a visual inspection of the areas that are being seamed together for colour/pattern variation even if the slabs are from the same lot. If colour/pattern does not meet the fabricators/end user' s satisfaction, slabs can be exchanged, as long as they have not been cut or modified in any way.

HanStone Quartz slab identification stickers contain useful information related to factory production, slab colour, finish, thickness, size, and slab grade. All of this info can be beneficial for all of the processes related to quartz manufacturing, transportation, fabrication and installation.



FABRICATION AND SAFETY EQUIPMENT

It is imperative that the health and safety of all workers should be of the utmost importance to all companies, large or small. Using the right tools for any job is one of the most important aspects of working safety.

Here are some examples of tools required to properly fabricate HanStone Quartz slabs.

Shop Machinery

- Bridge saw
- CNC machine
- Water Jet
- Line polisher (single or multi-head)
- Water treatment equipment
- Air compressor, hoses and accessories

Handling and Storage Equipment

- Overhead gantry
- Jib boom
- Forklift
- Vacuum lifter/slab clamp
- A-frames/storage racks
- A-frame carts
- Slab dolly
- Vacuum cups
- Fabrication tables

FABRICATION AND SAFETY EQUIPMENT

Hand Tools

- Water fed air polisher with variable speed preferred
- Wet profiling machine (edge router)
- C-clamps for lamination
- Miter clamps
- Angle grinders with variable speed preferred
- Diamond blades for use with engineered stone
- Diamond cups wheels
- Contour blades for cutting radius
- Zero tolerance drums
- Core bits
- Grinding stones
- Straight edges
- Flexible and rigid backer discs for polishing pads
- Polishing pads (50, 100, 200, 400, 600, 800, 1000, 1500, 3000)
- Felt pad and polishing powder
- Single edge razor blades
- Putty knives

Installation Tools

- Tape measure
- Carpenters square, combination square, bevel square, angle finder and compass
- Drill
- Jigsaw, oscillating saw, circular saw
- Variable speed angle grinder
- Diamond blades
- Core bits in various sizes
- Polishing pads and Velcro backers
- Diamond cup wheels
- Zero tolerance drums
- C-clamps, Bar clamps
- Saw Horses for on-site cutting
- Extension cords
- Shop Vac
- Floor coverings/Drop cloths

FABRICATION AND SAFETY EQUIPMENT

Installation Tools (Cont'd)

- 4/6/8 ft levels
- Torpedo level
- Utility knife and blades
- China markers, carpenters' pencils
- Painters tape
- Pine or composite shims (composite is recommended as they do not get affected by moisture)
- 6' pry bars
- Suction cups
- Slab clamps
- Sink hole saver
- Pro cart slab dolly
- Gorilla grips or other seam setting devices
- 90-degree seam setting device for waterfall gables
- Rags or paper towels
- Solvents for clean-up- Methyl Hydrate/Methanol or Denatured Alcohol **(Never use Acetone)**
- Caulking guns
- Adhesive gun for integra glue (if used) and mixing tips
- Single edge razor blades
- Propane torch and tip
- Putty knives
- C-clamps, Bar clamps

Adhesives

- 100% silicone
- DAP caulking
- Flow and/or knife grade epoxy
- Polyester
- Methacrylate ester
- Penetrating acrylic
- Appropriate pigments and hardeners

FABRICATION AND SAFETY EQUIPMENT

Safety Equipment

- First Aid kit
- Safety glasses
- Dust masks
- Protective non slip gloves
- Nitrile gloves
- Waterproof aprons
- Ear plugs
- Eyewash station
- Proper safety footwear
- Hard hats when needed
- Reflective vest when needed

Following these recommended guidelines should ensure trouble free fabrication and installation of HanStone Quartz.

Note that the material contained in this bulletin is, for the most part, general and non-specific. More detailed information on tooling, RPM's, feed rates, etc. can be obtained from your specific equipment manufacturers or tooling vendors.

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. Any of these variables can have an impact on accurately cutting HanStone quartz slabs and eliminating damage.

MATERIAL AND EQUIPMENT CHECK

- Acclimate slabs to shop temperature before beginning. Frozen slabs have a higher risk of cracking during cutting.

- **Inspect: Always remove film from slabs and fully inspect for any defects before starting any type of fabrication. Do not cut with the film on.**

- Fissure and Crack Check: When fabricators receive slabs, they should check them for fissures or cracks. Hosing the slab down with water helps you see any cracks or fissures you may not have noticed beforehand. If cracks or fissures are found, the fabricator should refrain from cutting.

- Water: Always cut, drill, and polish using adequate amounts of water. Failure to do so may result in over heating of the slab and potential cracking issues and or discolouration. **NEVER dry cut.**

- Blades: Use the right blade for the saw. Check with the saws manufacturer to make sure you are using the best blade for the application. GranQuartz reps are knowledgeable when it comes to selecting the right blade for your saw and material. Saw blades are not universal.

- Regularly inspect your blade for true (square) and excessive wear or missing segments and replace when necessary.

- Maintain a level cutting bed. Depending on volume, resurface saw tables / change waterjet slats every 6 to 8 weeks.

- Never use materials such as polystyrene foam insulation or cement board as a cutting bed. These materials are too soft and compressive and have a tendency to deteriorate fast creating weak spots and out of level conditions.

FABRICATION GUIDELINES

- **Always start by cutting a minimum of 1/2" off of one length-side and one width-side of the slab. This will help to release any tension in the slab.**

- Amp Draw: Pay close attention to amp draw and cut speed. If your amp draw begins to rise you may need to dress or replace the blade. You may also be cutting too fast.

- Don' t Plunge cut! Avoid plunge cutting whenever possible. ALWAYS cut from the OUTSIDE edge and into the slab: Start the cut from the outside of the material and cut inwards. Lift your saw out when you need to stop.

- If plunge cutting is necessary, a minimum of 3/8' holes should be cored at all corners beforehand to avoid cross cutting.

- Relief Cuts: Make relief cuts on areas that will have a radius or curve to help prevent a blowout. You can also core holes in the corner of ' L' shape tops to prevent the chance of cracking. Cut from the outside into this core.

- Use Shims. Insert shims behind the blade as you are cutting. This will help keep the material from closing up and pinching the blade. You can also use shims to support the slab in any areas where it might have a slight warp to it. This will prevent it from settling and possibly cracking as it is cut.

- Warping: If the slab is warped, it will begin to level out unevenly as it is cut. This can result in either a blowout or a pinched blade.

- Do not ever alter the surface of HanStone Quartz slabs. This includes re-polishing, buffing, honing, sealing, or modifying in anyway.

- Special care should be taken when cutting solid colour HanStone slabs (Chantilly, Tranquility, Leaden etc.) and cutting speeds should be slowed down further.

CUTTING SPEED

The cutting speed is divided into two distinct but interrelated factors;

- Blade or spindle rotation (RPM' s)
- Sawing feed rate

The cutting speed is dependent on a number of variables which includes the type of equipment being used, type of blade, bond hardness, diamond grit size, wear on the blade, just to name a few. Always comply with equipment manufacturer' s recommendations and/or tooling vendor' s advice. Keeping the above statement in mind, here are a couple of general guidelines regarding cutting speed;

- **RPM's for a 12" blade should not exceed 3,600.**
- **Feed rate should generally be less than 30" / min.**

Cooling with Water ' Supplying an adequate volume of water at the sawing interface is a requirement for error free cutting of HanStone. Cutting with water prolongs the diamond blade life, reduces heat build-up, and helps reduce cracks that can be caused by overheating. Water must be supplied in the proper location or it will not cool the blade or the material properly. Water should always be focused at the point of contact between blade and material, and in the same direction as rotation of the blade. The amount of water used should be increased from the amount used in sawing granite or marble. If sparks are visible in the cutting process, or discolouration is found within the cuts, the water volume is insufficient or not reaching the blade / material interface.

To Avoid Excessive Chipping or Cracking

- Use a finer diamond grit blade.
- Reduce speed, both RPM & feed rate.
- Check blade for true (square) and excessive wear or missing segments.
- Check to see if sufficient amount of coolant is reaching the blade / material interface.
- Always start by cutting 1/2' off of one length-side and one width-side of the slab. This will help to release any tension in the slab.
- Do not plunge cut. Whenever possible, cut from the outside edge into the slab. Lift your saw out when you need to stop.
- If plunge cutting is necessary, holes should be cored at all corners beforehand to avoid cross cutting and cracking.
- Relief cuts should be made at areas that will have a corner or curve to avoid blow outs.
- All inside corners should have a minimum 3/8' radius.

CUTTING SPEED

CNC Cutting: Best Practice

When using a CNC to cut and edge HanStone pieces, you will be using either a special tool fitted with a diamond saw and sawblade, or a diamond impregnated finger bit. If using the saw and sawblade tool, please refer to the previous section on ' Sawing Best Practices' .

When using a diamond finger bit, select a bit that features soft bond segments or one that is specifically recommended for quartz surfaces. Finger bits are generally 7/8' to 1' in diameter. Because of the large amount of material removed with a 1' bit, feed rates will be much slower than using a saw. When using a CNC there are many variables that can affect the performance of the equipment. Keeping in mind that you should always comply with equipment manufacturer' s recommendations and/or tooling vendor' s advice, here are some general cutting guidelines using diamond finger bits on a CNC;

- **Spindle RPM's should be between 4,000 – 8,000.**
- **Feed rate should be 8" to 16" / minute.**

Cooling with Water ' Supplying an adequate volume of water at the cutting interface is a requirement for error free cutting of HanStone. Cutting with water prolongs the diamond tooling life, reduces heat build-up, and helps reduce cracks that can be caused by overheating. Water must be supplied in the proper location or it will not cool the finger bit or the HanStone properly. Water should always be focused at the point of contact between finger bit and the material, and in the same direction as rotation of the bit. The amount of water used should be increased from the amount used in cutting granite or marble. If sparks are visible in the cutting process, the water volume is insufficient or not reaching the tool/ material interface.

To Avoid Excessive Chipping or Cracking

- Use a finger bit made specifically for quartz or engineered stone.
- Reduce feed rate.
- Check finger bit for excessive wear or missing segments.
- Check to see if sufficient amount of coolant is reaching the tool / material interface.
- Check vacuum pressure to make sure the piece is held firmly during the cutting process.

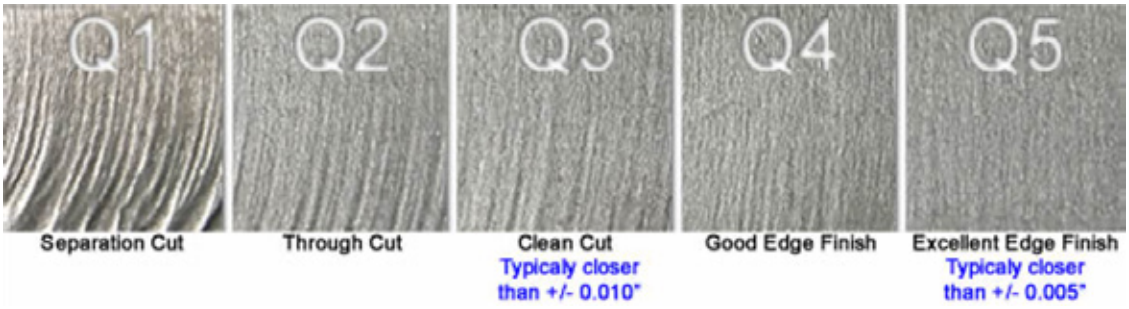
CUTTING SPEED

Waterjet: Best Practice

Waterjet cutting is accomplished using a high velocity stream of water and abrasive to cut HanStone slabs. Water pumped at 40,000 to 60,000 psi accelerates through a sapphire, or ruby orifice. The stream mixes with abrasive and air as it accelerates through the nozzle, exiting as an abrasive stream with a cutting diameter of 0.020’ to 0.060’ . The combination of high velocity water and abrasive particles impact on the material face to perform the actual cutting. Quartz material is removed as microchips, with the resulting kerf often serrated at the bottom.

The stream which produces the cut will generally carry 0.5 to 1.5 pounds per minute of abrasive. The quantity of abrasive is dependent on the orifice size which in turn, produces the cutting stream size. This is chosen based on the material being cut. The most cost effective and commonly used abrasive is garnet.

The cutting speed is variable with the trade-off being the quality of the cut. Most manufacturers use a scale of 5 levels of quality in cutting. At faster speeds the cut becomes visibly serrated and irregular at the bottom of the cut. This corresponds with the lowest level quality of cut or what is referred to as a separation cut ’ Q1 (see below).



HanStone does not recommend Q1 or separation cut quality, as this could lead to material breakage during cutting. There are a great number of variables in the use of waterjet technology that can affect cutting speed. Some of these include the type of equipment being used, pump size, horsepower, pressure, abrasive volume, material thickness, geometry of cut, etc. In addition, the software that controls the cutting nozzle also varies in levels of complexity, allowing the cutting speed to change due to the varying geometry of the cut. Due to this you will need to consult with your equipment manufacturer for recommended feed rates.

CUTTING SPEED

Waterjet: Best Practice (Cont'd)

To Avoid Excessive Chipping or Cracking

- Maintain the slats that form the cutting bed. Replace when worn.
- Reduce feed rate. Never use Q 1 (separation cut) quality.
- Check abrasive volume and increase if necessary.
- Reduce the distance from the nozzle to the HanStone slab.
- Upgrade software to the most current version.

Summary

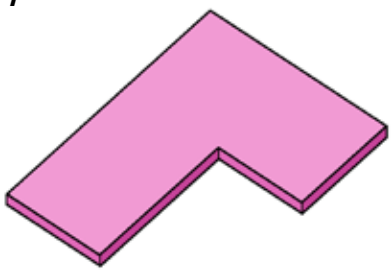
1. There are many variables in the fabrication process; slab handling methods, condition of equipment, level cutting bed or table, vacuum pressure, type of saw blade, cutting feed rate, water pressure, spindle speed, condition of tooling, volume and placement of coolant, and variable geometry of cutting, just to name a few. If HanStone material is breaking during the fabrication process, all of these variables should be looked at and/or adjusted prior to assuming that the slab is defective.
2. Always inspect slab material for defects prior to cutting.
3. In general, HanStone Quartz Surface should be cut at a slower speed or feed rate than granite.
4. Always start by cutting 1/2' off of one length side and one width side of the slab. This will help to release any tension in the slab.
5. Whenever possible, cut from the outside of the slab toward the center. Avoid plunge cutting.
6. Supply an adequate volume of water at the cutting interface. The amount of water used should be increased from the amount used in cutting granite or marble.
7. Use the correct equipment, blades, and tooling for cutting Quartz Surfacing.
8. Always comply with the equipment manufacturer' s recommendations and/or tooling vendor' s advice.

CORNERS

- Whenever possible, the surfaces of L or U-shaped kitchens can be fabricated from one single slab. In these instances, a minimum of 3/8’ radius must be used for inside corners. A larger radius will produce a stronger corner.

- **Whenever a true 90-degree corner is requested, a seam must be used. This can be achieved using a straight seam, or a euro seam with a 1 ½” -3” radius.**

INCORRECT



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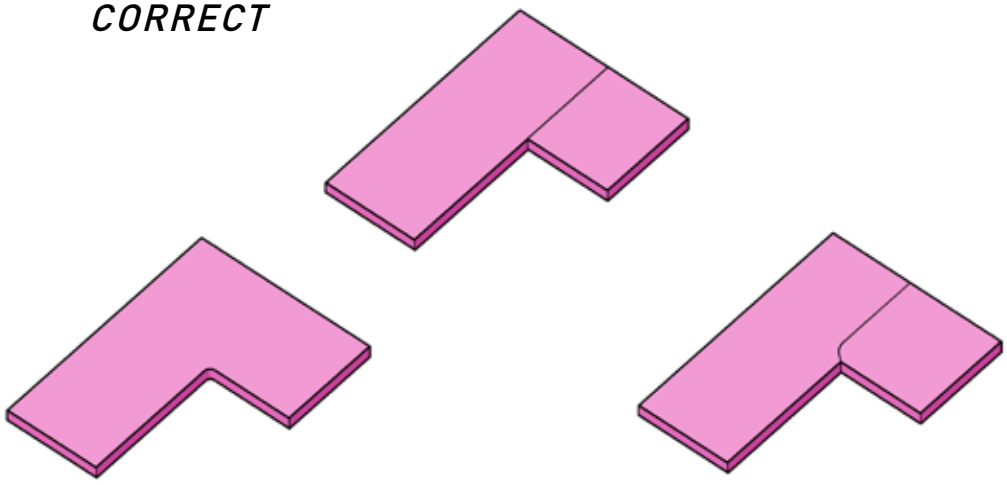
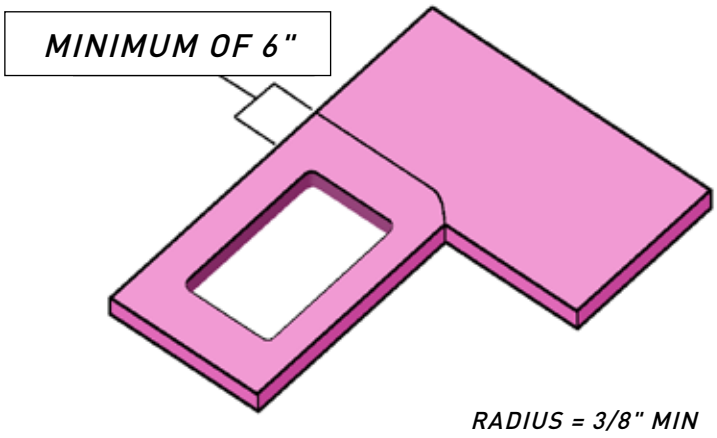


SEAMS

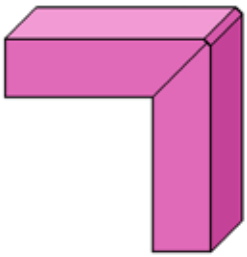
- Seams should be made flat and level using shims to adjust the material before applying adhesive.
- To allow maximum bonding strength, the bottom half of every seam edge should be roughened and biscuit cut, then cleaned before setting to allow the adhesive to properly bite.
- Never excessively bend the seaming area using clamps or a seam setting device. This will cause tension in the pieces that may lead to fracturing.
- A finished seam should be no more than 1/16’ wide. This can be achieved using Gorilla Grips or similar seam setting tools.
- Do not surface polish seam areas to make them flat or level.
- Seams should always be fully supported on both sides, front-to-back, ideally on a double gable spanning from top to bottom.
- Seams should be avoided over the dishwasher or compactor. We do not recommend or honor warranty if a seam is placed over a dishwasher or a trash compactor.
- All seams should be at least 6’ from all cutouts, such as sinks, cooktops, and other appliances. In addition, from an appearance point of view, try to position the seams so that they don’ t look out of place.
- Never run a seam through a cutout such as a sink or cooktop. This creates a weak spot.
- Seams should be a minimum of 18’ from a finished end.



MITERED EDGES

- To maintain a tight fit and maximum strength, miters should always be cut at 45 degrees.
- A mitered joint should be clean, tight, and square.
- Always ensure the adhesive is fully distributed throughout the miter joint to avoid seam separation and chipping
- To avoid chipping, a minimum of 1/8 radius or bevel should be used to soften the mitered edge profile.
- Do not cut angles less than 45 degrees as this will promote damage such as chipping and cracking.
- Overcut miters filled with epoxy are prone to chipping and cracking and are not covered under warranty.
- **When installing mitered waterfall gables, ensure that the top is supported by the substrate and not the waterfall legs themselves. HanStone does not recommend supporting stone-with-stone and will not warranty any damage caused by improper installation.**

CORRECT



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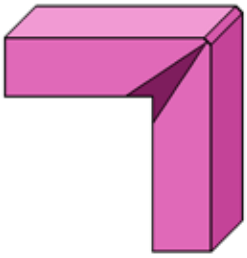

LAMINATION

- Lamination pieces should always span the full length of the top piece it is being adhered to. If this cannot be achieved, the joint in the lamination pieces must be 45 degrees to reduce any stress points.
- Outside corners can be cut at 45 degrees to create a cleaner look but a butt joint is also acceptable.
- It is important to use the same slab for lamination strips as the countertop surface to ensure proper colour match.
- Laminated edges should be polished to the same factory finish as the top surface of the stone.
- Prior to finish polishing, all excess adhesive must be removed from the edge profile, and the edges must be smooth and clean.
- Always polish using a water fed air polisher. Dry polishing will cause overheating leaving the edges prone to chipping and discolouration.
- A minimum of 1/8’ radius or bevel is recommended on the top and bottom of edge profiles to prevent edge chipping.

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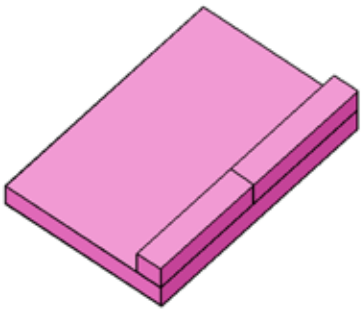

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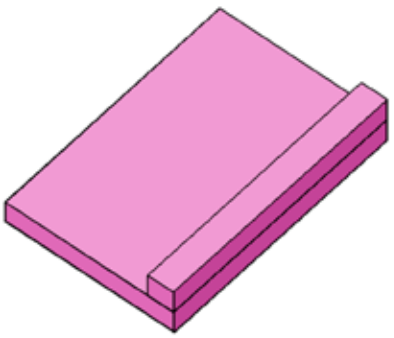

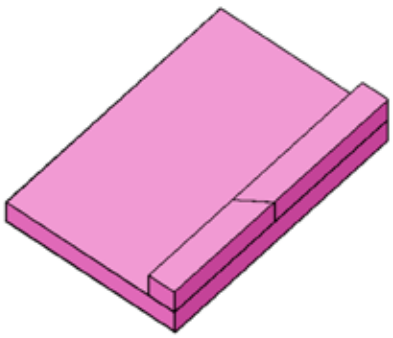

SEAMING ADHESIVES

- It is recommended that the manufactures instructions are followed for the proper use of all seaming and laminating adhesives.
- Proper mixing ratios must be followed along with minimum work temperatures to allow proper curing of adhesives.
- If using un-tinted 2-part adhesive, pigments must be added to closely match the stone colour to create an unnoticeable seam.
- Integra adhesives offers a wide range of pre-tinted adhesives that closely match HanStone Quartz.
- After the glue has cured, remove the seam setter and clamps. There will be a raised bead of glue along the seam (that squeezed out when the pieces were brought together). This will need to be removed with a razor blade. Hold the blade vertical and at a 45-degree angle to the seam. Scrape forward and backward on the bead until the glue is flush with the surface of the stone.
- Never soak the adhesive in solvent to soften it before removal.

INTEGRA ADHESIVES COLOUR CHART

Color match may vary with HanStone dye lot variations. Information is provided as a reference only; end user should verify suitability prior to use.

For the full list of Integra Adhesives, including colour matches for discontinued HanStone colours, visit **http://www.integra-adhesives.com/color-charts/**.

AJANTA	WARM GREY - 0290
ANGORA	WHITE LINEN - 0310
ARAMIS	MEDEA - 3186
ARTISAN GREY	STELLAR GREY - 2403
ASPEN	BRIGHT WHITE - 3011
AURA	CLOUD - 3036
AURORA SNOW	GLACIER WHITE - 3006
BIANCO CANVAS	GLACIER WHITE - 3006
BLACKBURN	IRON GREY - 3064
BRAVA MARFIL	WHITE LINEN - 0310
CAMPINA	WHITE CHOCOLATE - 0300
CHANTILLY	PURE WHITE - 0190
COAST	CLOUD - 3063
EMPRESS	POLAR WHITE - 3080
FUSION	CLOUD - 3063
INDIAN PEARL	CLOUD - 3063
ITALIAN WAVES	ALABASTER - 0010
KINDRED	NEWGALE GREY - 2340
LEADEN	METEOR GREY - 2320
MERCER	TUSCAN WHITE - 3169
METROPOLITAN	NEWGALE GREY - 2340
MONTAUK	BRIGHT WHITE - 3011
MONTEREY	PEARL GREY - 3014

OCEANA	BRIGHT WHITE - 3011
PEWTER	STELLAR GREY - 2403
ROCKY SHORES	WHITE CHOCOLATE - 0300
ROYALE BLANC	PERFECT WHITE - 3172
SEDONA	CLOUD - 3063
SERENITY	NEWPORT GREY - 2360
SILHOUETTE	BLACK - 2080
SMOKE	SEASHELL - 3035
SOHO	GLACIER WHITE - 3006
SPECCHIO WHITE	GLACIER WHITE - 3006
STERLING GREY	METEOR GREY - 2320
STORM	TARPULIN GREY - 3313
STRATO	WINTER WHITE - 3181
SWAN COTTON	NEWPORT GREY - 2360
TERRA	BUTTERSCOTCH - 0050
TIFFANY GREY	TIFFANY GREY - 3022
TOFINO	BRIGHT WHITE - 3011
TRANQUILITY	PURE WHITE - 0190
UPTOWN GREY	BATTLESHIP GREY - 3274
VICTORIAN SANDS	SEASHELL - 3035
WALNUT LUSTER	TAN - 0235
WHISTLER	SNOW WHITE - 0230
YORKVILLE	WHITE LINEN - 0310

SUPPORT

Similar to natural stone, HanStone Quartz is extremely heavy and needs to be supported properly. With 3cm material, the tops can be set directly on top of the properly installed and leveled cabinets, as this provides the perimeter and cross support required. This support is not adequate for 2cm tops, and 2cm profiled edges are generally laminated to create a 4cm look. For these reasons, we require a built-up perimeter support or full sub top on our 2cm material.

Perimeter Support

- Recommended material ’ 5/8" or 3/4" x 2"
  - Moisture resistant MDF
  - Moisture resistant plywood
  - Particleboard is not acceptable for this application

- Wood strips should be installed continuously along the front and back of the cabinets, and crosswise, (front to back) at the ends, and over every supporting gable.

- Front-to-back support is also recommended under and along both sides of all seams.

SUPPORT

Overhang Support

Depending on the application, you might be required to provide overhang support for the countertop. These are some guidelines to follow when working with overhangs.

Requirements	2cm HanStone Quartz	3cm HanStone Quartz
Support not required (unless over 1/3 of the top is overhanging)	Overhangs under 12".	Overhangs under 16".
Full sub top with corbels	12"- 18" use full sub top along with corbels evenly spaced at 3' on center or less.	16"- 24" use full sub top along with corbels evenly spaced at 3' on center or less.
Full sub top with legs or columns	Overhangs over 18" use full slab top along with legs or columns connected at the top with rails of adequate size to provide perimeter support.	Overhangs over 24" use full slab top along with legs or columns connected at the top with rails of adequate size to provide perimeter support.
Raised bar mounted on the top of pony wall	Full sub top and bracket or corbel support at 3' (on center or less) is always required.	

2/3 ON -1/3 OFF Rule

Always remember as a general rule of thumb, with overhangs less than 12' /2cm or 16' /3cm, the over hang can still only be no more than 1/3 of the full length of the top provided there are not other means of support added.

For example: if the cabinets are 20' deep, the allowable overhang can only be a maximum of 10' unless more support is added.

CUTOUTS

∑ When preparing a cutout, always use a core bit. Core out all 4 corners and then finish by cutting out the centers.

- It is mandatory to always leave a smooth radius within the corners of all cut outs (cook top, sink, or other) to avoid stress within each corner (3/8’ minimum).

- Do not cross cut or over cut these corners. Damaging the corners will cause stress points that may lead to fracturing.

- Remove all blade marks and leave cut smooth.

BACKSPLASH

∑ Check the splash for appropriate fit and then lay the top face down on the counter in the install position.

- Apply dots of silicone to the back of the splash on the ends and at 10’ intervals along its entire length. Be careful to keep the upper dots low enough so the silicone doesn’ t ooze out the top when the splash is pressed against the wall.

- Roll the splash up and press onto the wall. Do not try to conform the splash to any curvatures in the wall as that would put undesirable stress on the stone.

- Cut outs for electrical outlets or other must have a radius in all 4 corners.

- HanStone recommends a minimum of 2’ between an electric or induction stove or cooktop and a HanStone backsplash, and a minimum 10’ from the center of a gas burner.

APPLIANCES

- Always leave a minimum of 1/8’ around all sides of appliances to allow for heat expansion.
- When installing cooktops, it is highly recommended to use aluminum reflective tape around all edges to protect the countertops from heat.
- Double sided foam tape or silicone can be used to stick down cooktops.
- Under no circumstances should any mounting fasteners be drilled or screwed into HanStone Quartz surfaces.
- For dishwasher mounting, where no sub top is present, there are metal plates designed for this purpose which are glued to the underside of the countertop or screwed to either side of the cabinets.
- Hot pots or pans should never be placed directly on top of HanStone Quartz countertops. Trivets must always be used. Heated work top appliances such as crock pots should also be placed on trivets as the prolonged heat exposure can cause seam separation and cracking.

SINKS

- Sink cut out corners should always have a minimum 3/8’ radius to avoid stress cracks forming.

- Sink bowls may be set anytime, but we recommend dry setting under-mount sinks prior to deck installation to confirm fit.

- When installing undermount sinks, it is highly recommended to use either a sink setter or sink harness type product. These will help to support some of the weight of the sink and avoid unnecessary repairs to fallen or separating sinks.

- 100% silicone should be used around the full edge of the sink to create a strong, watertight bond.

CLEAN UP

Care must be taken when using any type of harsh chemical in conjunction with HanStone, and solvents are no exception. Err on the side of caution by using any solvent sparingly and diluted (instead of full strength) whenever possible. Wipe up any spilled solvent immediately and do not allow solvent containers, bottles, sponges, or saturated rags to sit on the quartz countertop surface.

CHEMICALS TO AVOID

- ◊ Solvents such as Acetone, nail polish remover, lacquer thinner.

Acetone should never be used due to the possibility of damage to the surface of the HanStone material. Any damages caused by Acetone or other harsh chemicals or abrasives will void any possibility for warranty claim approval.

RECOMMENDED SOLVENTS FOR USE IN FABRICATION AND INSTALLATION PROCESSES'

- ◊ Denatured Alcohol, Methyl Hydrate, Methanol, Rubbing alcohol, Isopropyl alcohol.

- Use solvent sparingly.
- Do not pour solvent directly onto the countertop. Pour solvent on a clean rag and wipe the HanStone surface with the rag.
- Wipe up any spilled solvent immediately and rinse thoroughly with water.
- Do not place containers of solvent directly on the HanStone countertop.
- Use diluted solvent instead of concentrated whenever possible.
- Do not allow rags soaked in solvent to sit on the countertop surface.
- Some chemicals are more harmful to the HanStone surface than others. Concentrations and time of exposure are also important factors.
- Never use or recommend abrasive cleaners such as vim or magic eraser. They may also cause irreversible damage to the surface.

Visit www.HanStone.ca for Care and Maintenance recommendations.

HanStone has developed these guidelines in order to produce the best results possible. Failure to follow these guidelines, and any resulting customer dissatisfaction, will become the sole responsibility of the fabricator.

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HANSTONE CANADA
TOLL FREE NUMBER: +1 844.331.2428
EMAIL: INFO@HANSTONE.CA

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