

ConfiaAd[®]

Quartz Surfaces

Fabrication Manual



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1. Introduction

ConfiaAd® Quartz Surfaces are composed of natural quartz and high quality polymer resin, and pigment providing the exquisite, distinctive, and luxurious design to global customers. Unlike natural stones, **ConfiaAd®** Quartz Surfaces are non-porous, stronger, longer lasting, hygienic, versatile, chemical/stain resistant, and easy to maintain/repair. It also comes with 15-year Limited Warranty for residential applications and 10-year Limited Warranty for commercial applications.

ConfiaAd® Quartz Surfaces are ideal for residential and commercial applications. such as kitchens, bathrooms, luxury buildings, and other areas where highly durable surfaces are needed.

This manual recommends fabrication method for countertops from **ConfiaAd®** Quartz Slabs supplied directly or by distributors. This manual doe not replace normal industry standards for the fabrication and craftsmanship. A basic knowledge of Quartz fabrication is required.

Any failure by a Fabricator to comply with the recommended methods of fabrication of countertops from slabs may result in claim by end users and refusal of an end users' claim. Please contact your local **ConfiaAd®** Quartz Surfaces representatives office for asking the recommendations in this manual.

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The information contained here is deemed reliable; however, none of the contents—including but not limited to the recommendations, pictures, techniques, and or instructions – is to be conceived as implying legal liability of fitness for a particular purpose, any other type of warranty, or being exhaustive or conclusive in its coverage and nature of information. Per each user's specific application, all necessary measures and precaution must be taken in order to confirm and test the adequacy for such needs or application. The information contained herein is strictly for purposes of reference and as such, Jin Gwang Industries Co., Ltd. and its affiliates assume no liability for its accuracy or suitability or the use of such information for products other than ConfiaAd® Quartz Surfaces.

2. Safety Guidelines

“Safety is the most important thing.”

All fabricators and Installers are required to maintain a safe work environment. For preventing an accident, please follow the general safety rules as below.

- 1) To prevent injuries, always wear proper gear
 - Safety glasses (OSHA approved), Dust Masks, Ear/Nose Protection, Safety Shoes (non-slip), Hair-protective covering, and etc.
- 2) Wear appropriate apparel. Avoid wearing loose clothing, gloves, neckties, rings, bracelets, and other jewelry.
- 3) Keep work area clean, dry, well-ventilated, and well-lighted at all times.
- 4) Read instruction manuals before operating all tools and equipment. Learn and follow all manufacturers safety guidelines of all tools and equipment used in the shop.
- 5) Use the right tools. Don't force a tool to do a job for that it was not designed.
- 6) Tools exposed to water or moisture must be equipped with a **Ground Fault Circuit Interrupter (GFCI)**.
- 7) Keep tools in top condition for the safest performance.
- 8) Do not overreach.
- 9) Follow all OSHA and ANSI Safety guidelines.

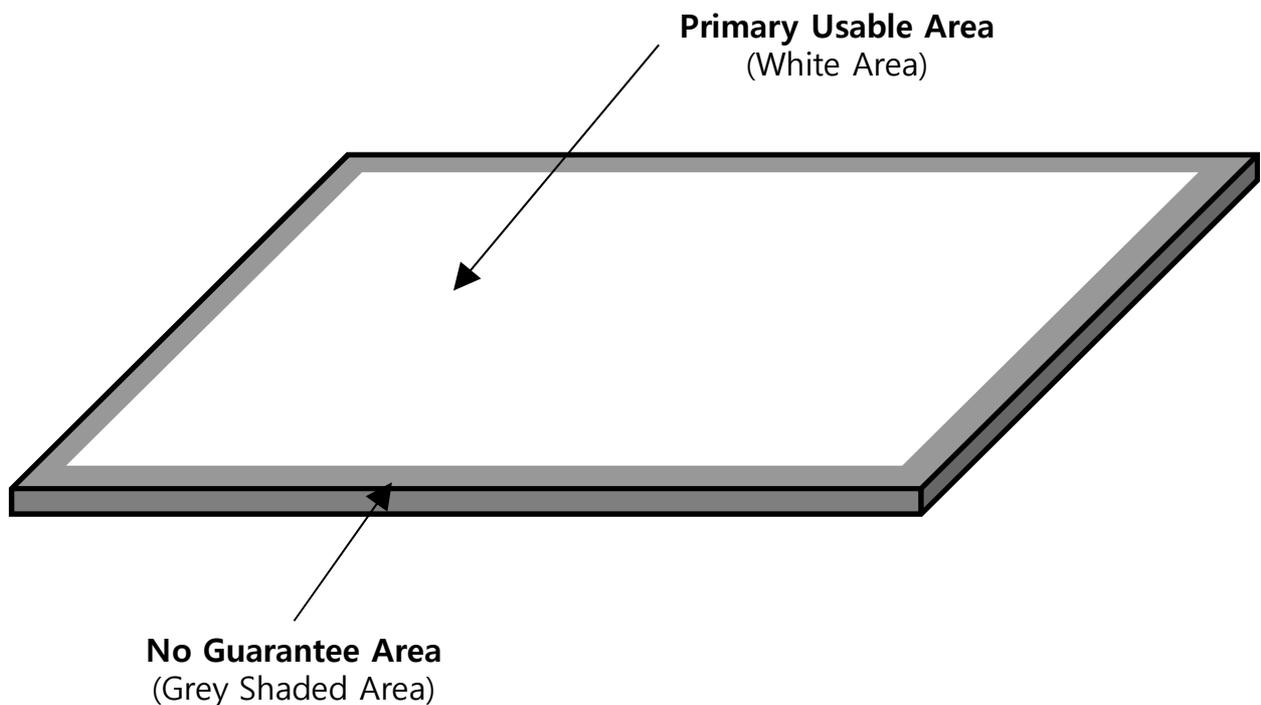
3. Handling & Storage

3.1 Dimensions

ConfiaAd[®] Quartz Surfaces are available in 2 sizes depending on colors.

Note: Not all colors are available in all sizes and thicknesses.

Length (in/mm)	Width (in/mm)	Thickness (in/mm)
118" / 3,000mm	55" / 1,400mm	0.75" / 20mm 1.125" / 30mm
126" / 3,200mm	63" / 1,600mm	0.75" / 20mm 1.125" / 30mm



3.2 Handling

ConfiaAd® Quartz Surfaces are normally transported from the factory in bundle Packaging or on A-Frames.

The slabs should be loaded/unloaded to/from a container with proper lifting machinery (Overhead crane with "C shaped" hoist, Forklift, clamps, and etc.)

Because of the heavy slab weight, the machinery must be capable of handling the following dimensions and weight safely.

Length (in/mm)	Width (in/mm)	Thickness (in/mm)	Weight (lb/kg)
118" / 3,000mm	55" / 1,400mm	0.75" / 20mm	450 lbs / 204kg
		1.125" / 30mm	675 lbs / 306kg
126" / 3,200mm	63" / 1,600mm	0.75" / 20mm	548 lbs / 248kg
		1.125" / 30mm	820 lbs / 372kg

Handle slabs in multiples of two. Use clamps or sling straps and lift the slabs face-to-face to minimize the scratch. For better grip, take care to grasp the slabs from the back while face-to-face.

Warning: Handling the slabs or even small pieces, keep a safe distance with extreme caution.



3.3 Storage

ConfiaAd® Quartz Surfaces should be stored inside, away from outside weather conditions and UV light. UV light can react with the polyester resin in the slabs and the slab will be permanently damaged (Color change, appearance change).

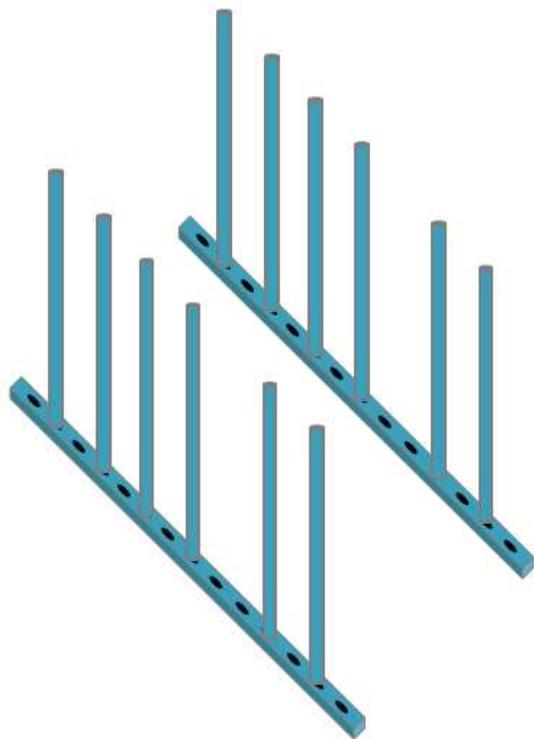
Slabs must be stored in a way that prevents warping.
Use at least two support beams to hold the slabs in place.

The slabs should be stored either on an A-frame or vertical racks.

The first slab against the frame should be the back side and the next sequential slab should be polished face to polished face. Then the following should be back side to back side and so on.

Store slabs for easy identification of colors and lot numbers.

Note: It is recommended that all slabs be secured with straps or clamps during storage.



4. Inspection

Performing visual inspection for defects for every slabs is fabricators' responsibility.

Please check all **ConfiaAd®** Quartz Surface slabs thoroughly before cutting, fabricating, altering, or before permanent installation.

Check List for Visual Inspection prior to fabrication

- Cracks
- Slab-to-slab color match
- Color Consistency within slabs
- Thickness
- Warpage
- Blotches (Irregular Spots)
- Pits / Voids / Blemishes
- Scratches
- Foreign Materials

Note: After the inspection of the slabs, if you find any **Product Non-Conformity(PNC)** that will increase fabrication time, please contact local **ConfiaAd®** Quartz Surfaces distributor for further instructions.

Jin Gwang Industries will replace the defective slabs before the slabs are cut or modified in any way.

Jin Gwang Industries will not be responsible for any labor charges incurred for fabrication of such defective materials. Or any incidental loss or damages resulting from mishandling.

5. Fabrication

5.1 Tools & Safety Equipment

The following is a list of recommended tools and safety equipment for **ConfiaAd[®]** Quartz Surface fabrications.

Basic Tools

- Bridge Saw
- Electric/Pneumatic Polisher
- Diamond Blade
- Diamond Grinding Wheel
- Diamond Polishing Pad
- Core Bits
- Edge Profiling/Polishing
- Slab Dolly
- A-Frame / Storage Racks
- Fabrication Table
- Air Compressor
- Clamp
- Water Treatment System
- Adhesives

Recommended Tools

- Water Jet
- CNC Machine

Safety Equipment

- First-Aid Kit
- Safety Glasses
- Dust Masks
- Gloves
- Waterproof Aprons
- Ear Plugs
- Safety Boots

5.2 Basic Fabrication Guidelines

For ensuring high quality products, do follow the guidelines as follows.

- Do not change the original surface finish of the slabs by re-polishing, honing, sealing, or altering the factory.
- Only water-cooled tools should be used for cutting, drilling, and polishing.
- Do not cut square corners as this will make stress points in slabs and may result in cracking.
- When cutting inside corner, always use a core bit to avoid damaging the corner area with cutting disc. Damage to the radius area will make a stress point.
- Any internal angled corner must be radiused. Cut with the saw up to the joint of the drilled hole, leaving the drilled hole intact.. Avoid dry grinding / polishing of the corner since overheating the area may result in a crack.

5.3 Templates

Template is a most important part of the whole fabrication process.

Before starting any fabrication of ConfiaAd® Quartz Surfaces, build accurate templates.

If the templates are perfect and fabricated according to the templates, installation will be problem free.

There are many different templates and choosing the one is up to the fabricators.

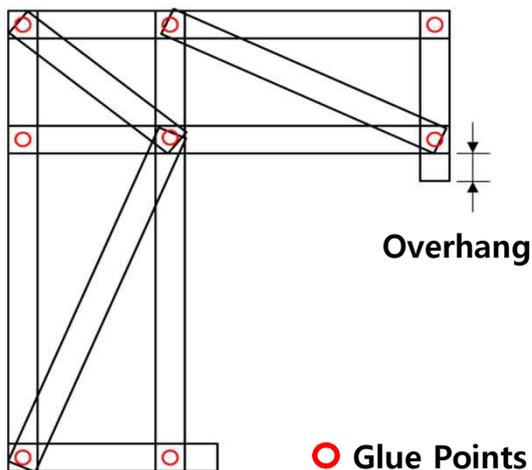
5.3.1 Luan Strip Template

The Luan Strip templating method is the most common one for the following advantages.

- Accuracy
- Rigid Template
- The Luan plywood 1/8" is readily available in most area.

Procedure

- Make sure you have adequate 1/8" Luan plywood strips cut into 2" width.
- Tack strips around the perimeter of the cabinets with dots of hot glue to hold them in position.
Tack these strips so they protrude past the face frames and end panels creating proper overhangs.
- By hot gluing strips from front to back, reinforce the template.
- Do not forget to mark the centers of your sink base, the center of cooktop, and other cutouts.



5.3.2 Other Templates

Cardboard or other materials like corrugated plastic can be used to make templates. Depending on the fabrication shop, the material and process will be different. Before proceeding, materials and processes should be verified with fabricators.

Digital Template

Currently there are a lot of various digital templates can be used to capture accurate Countertop size and configuration data.

These digital templating method have advantage of being able to process the digital information to state-of-the-art fabrication equipment such as CNC and water jets.

These digital systems can use lasers, digital cameras, or point to point digitizers.

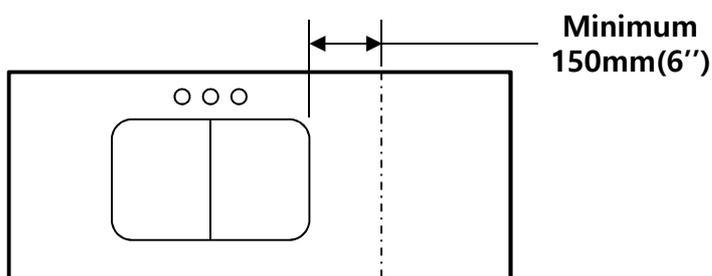
Although the initial investment may be considerable, the long term savings due to accuracy and productivity increase may be well worth the cost.

5.4 Seam Placement

When fabricating and installing ConfiaAd® Quartz Surfaces, there are many factors that may make it necessary to seam two pieces of material together.

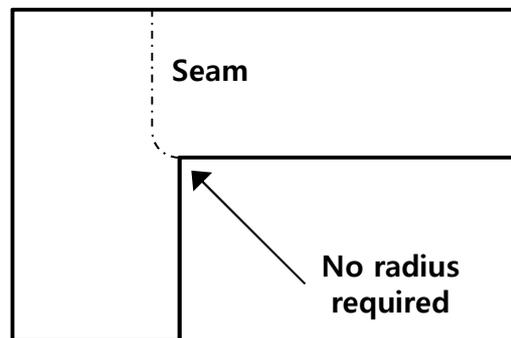
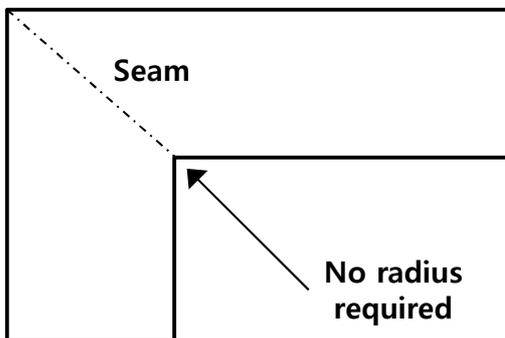
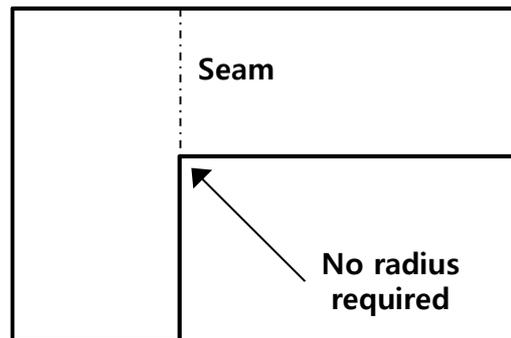
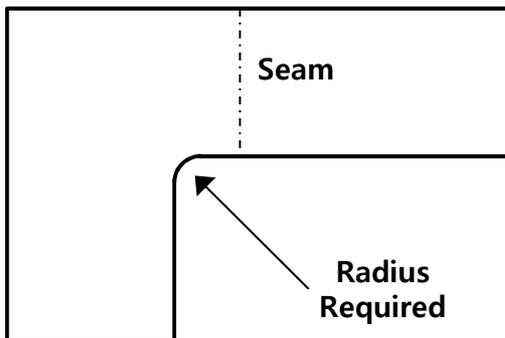
Right seam placement will help you minimize the time and the use of material.

- Place seams to get maximum yield of the material.
- Minimize the number of seams.
- Seams should be avoided in the following areas
 - 1) Over the dishwasher or trash compactor.
 - 2) In direct Sunlight
- All seams should be at least 150mm (6") from any cutouts, such as sinks, cooktops, and other appliances.
- Although template technician will create seam placement, the final seam placement will be determined by the fabricator.
- There should be no seams on an overhang of a peninsula or a island.



5.5 Cutouts

- Cross cutting should be avoided.
- When preparing a cutout, always use a core bit.
Avoid damaging the drill area with a cutting disk.
- Damage to the drilled area can result in stress points that may lead to hairline cracks. All cuts should be done using only wet diamond cutting tools to avoid generating excessive heat, which could also result in hairline cracks.
- Always allow an extra 3mm(1/8") between the appliance and the edge of the cutout for expansion.
- When the corner is cut from a solid piece, all inside corners must have minimum 9mm(3/8") radius to reduce corner stress.
- In case of L-shaped and U-Shaped tops with seam in the corner, no radius is required at that corner.
- Radius all outside corners to a minimum 3mm(1/8") for safety purposes.

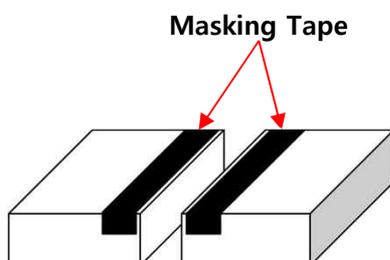


5.6 Seaming

- Use state-of-the-art seam setter tool.
For the best result, use **ConfiaAd®** Seamless Joint Adhesives
- Seam should not be more than 1/16" wide.
- Surface elevation of both pieces must be exact and perfect.
- Make sure the color and pattern matches across the seam..

Procedure

- ① Work joint edges with diamond pad (#400) to remove chips.
- ② Clean joint edges with "Acetone" or "Denatured Alcohol".
- ③ Build up 2 to 3 layers of masking tape on each side of the seam 2mm from the joint. This will act as a dam & wiping guide allowing the seam to be overfilled.
- ④ Keep the two seam pieces apart about 3mm (1/8").
- ⑤ Place cartridge in dispenser and purge small amount of adhesive
This ensures that both components are present.
- ⑥ Set the mixing tip to cartridge and purge a small amount of adhesive.
- ⑦ Pour the **ConfiaAd®** Seamless Joint Adhesives into the seam with double head from the farthest end.
- ⑧ Work adhesive in both directions to ensure that any chips are filled.
- ⑨ Pull seam together with clamp.
- ⑩ Remove tape and allow to cure.
- ⑪ Cure time is temperature dependent.
Allow 25 ~30 minutes at 22°C (72°F)
- ⑫ Once fully cured, remove the clamps and scrape excess adhesive flush to surface with cutter blade or razor.
- ⑬ Enhance the seam color and shine using **ConfiaAd®** PCSS and wool pad.

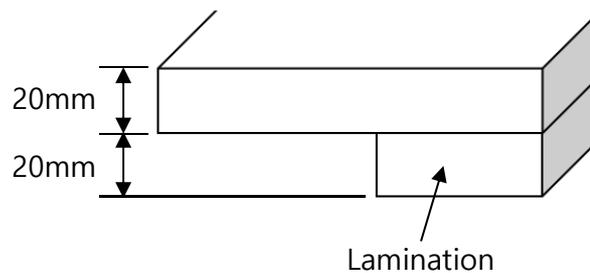


5.7 Lamination & Edge Detail

5.7.1 Lamination

Lamination is a deck with 1 layer of 20mm (3/4") material stacked at the edge of countertop to give deeper look to the top.

This is usually done for 20mm (3/4") materials to match the height and depth of the cabinet.



Procedure

- ① Cut strips to the appropriate width (50~100mm recommended) from the same slab as the countertop surface material to ensure a color match.

※ Note

- 45° corner joint is recommended to minimize the stress on corners.
 - Use full-length lamination pieces.
 - If you cannot use full-length lamination pieces, ensure that the joint in the lamination piece is at 45° to reduce stress points.
- ② Flip the countertop piece so that the back is facing up.
 - ③ Clean all areas to be laminated with denatured alcohol.
 - ④ Apply **ConfiaAd®** Seamless Joint Adhesives to area to be laminated. Use enough adhesives to allow excess to squeeze-out.
 - ⑤ Once you applied adhesives, place clamps every 80~100mm (3~4"). This will give enough clamping pressure to make the seam tight and smooth.
 - ※ Too much clamping could cause all the adhesives to squeeze out.
 - ⑥ When the adhesive has cured, check the lamination for a tight fit and for voids. Do not leave any adhesive voids. Make certain all voids are filled prior to profiling the edge.
 - ⑦ Apply your edge profile.

5.7.2 Edge Detail

Followings are the commonly used edge profiles.



Standard Eased



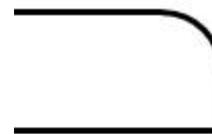
Bevel



Cove



Round



Half Bullnose



Demi-Bullnose



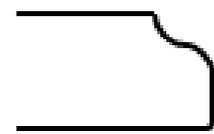
Full-Bullnose



**Round
Top & Bottom**



**Bevel
Top & Bottom**



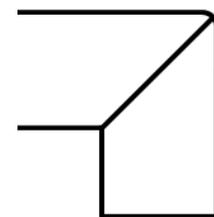
Ogee



Cove Ogee



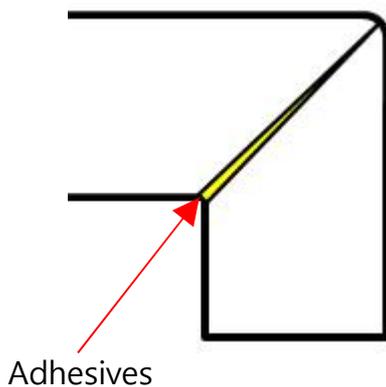
Waterfall



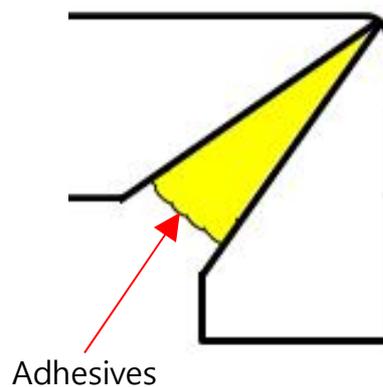
Mitered Edge

※ Mitered Edge

- Mitered Edges should be done at a 45° angle to ensure maximum strength. Do not cut edges less than 45° as this makes the edge prone to physical damage such as chipping.
- Incorrect angles restrict the type of edge that can be produced, since the larger the edge profile, the larger the joint that is visible.
- Ensure that the adhesive is thoroughly distributed throughout the joint.
- Mitered Edges have the greatest area of weakness and are most prone to chipping. Chipping is most prevalent where the application of the adhesive is not evenly distributed throughout the joint.



Correct



False

5.8 Backsplash

There are two backsplash options to choose.

- Loose Backsplash
- Full Height Backsplash

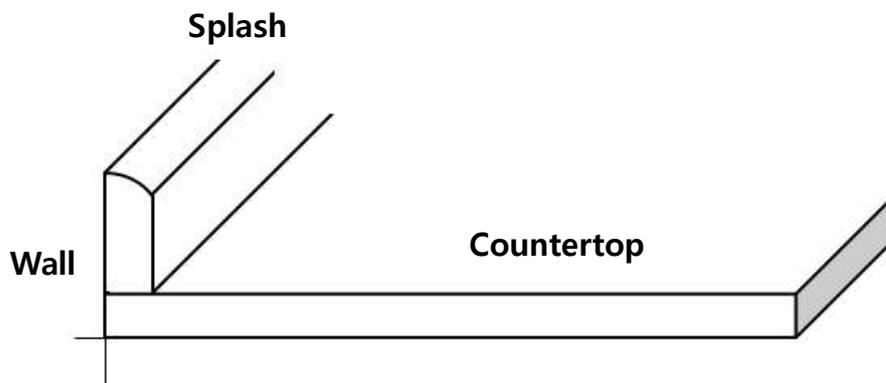
5.8.1 Loose Backsplash

Loose Backsplash is the most common and widely used method and the backsplash is set on the top of the countertop.

The Loose Backsplash is generally from 80~120mm (3~5") high and 20mm (3/4") thick but the height can be chosen by customers' preferences.

Installation of Loose Backsplash

- Cut the splash from the same materials that were used for the countertop fabrication. Always check for color match before fabricating.
- Cut all splash to the required size.
The top edge and any exposed ends should be polished. Standard is eased edge.
- Apply dabs of silicone adhesive every 150~200mm (6~8") on the back of the splash that will contact with the wall.
Prior to setting the splash into position, run a thin bead of adhesives on the back surface edge of the countertop where the splash will rest.
- Put the splash in place and push tight to wall and deck of the countertop.
- Remove excess silicone squeezed from the joints.



5.8.2 Full Height Backsplash

This splash runs from the top of the counter to the bottom of the upper cabinets.

After the countertop is installed, it is strongly recommended that the full height backsplash be templated.

Make a template of the wall where the backsplash would be.

Corrugated plastic templating is the best method for the Full Height Backsplash.

Installation of Full Height Backsplash

- Cut the corrugated plastic to 1/8" (3mm) short of overall height and length. If there are different heights, cut the pieces separately. Make these pieces longer than needed by about 200mm for overlapping and gluing.
- Once all the pieces are cut to size, hot glue them together.
- After the pieces are glued, cut 40mm wide strips and hot glue to the template.
- Lay the template on the material and trace out. Lay the template flush with the bottom of the material. After tracing is finished, use a core drill bit and grinder to make the required holes for the backsplash.
- The top and bottom of full height splash will not be exposed and do not require a polish finish. Polish all exposed sides and edges with eased edge.
- After the piece is cut to size, fit it into place.

5.9 Support

ConfiaAd® Quartz Surface is extremely heavy and needs to be supported on a strong perimeter frame.

The best materials for ConfiaAd® Quartz Surface countertop support is made from moisture resistant wood products (Plywood, Solid Hardwood Lumber) and even steel.

5.9.1 Countertop Support

- All the tops need to be supported every 600mm (24")
- Apply perimeter support strips to the cabinet surfaces. Install center support stringer materials across the cabinets for support where necessary to meet span requirements above.
- Support should be provided under all countertop joints.
- Use 100% silicone adhesive to bond ConfiaAd® Quartz Surface to wood, steel, aluminum, etc.
- All cabinets must be leveled and shimmed as necessary to 1/16" tolerances prior to countertop installation.
- After the support system is installed and leveled, you will be ready to begin installation of the ConfiaAd® Quartz Surface countertop.

5.9.2 Overhang Support

Followings are the guidelines for overhang support.

Overhang Length		Support Requirement
20mm (3/4") Thickness	30mm (9/8") Thickness	
< 300mm (12")	< 400mm (16")	No additional support required
300mm (12") ~ 450mm (18")	400mm (16") ~ 600mm (24")	Brackets required at 600mm (24") intervals.
450mm (18") <	600mm (24") <	Legs, Columns or Panels Required at 600mm (24") intervals

6. Installation

6.1 Transportation

ConfiaAd® Quartz Surface countertop sections are heavy and fragile.

When planning and packing for transportation, consideration must be given to portability and site access.

- "A" frame carts with wheel and wheel locks is one of the best option for transport.
- Transport **ConfiaAd®** Quartz Surfaces vertically on "A" frames.
All countertop sections should be touched face-to-face or back-to-back.
- Brace or otherwise secure all cutouts to avoid flexing of the seams and corners.
- Make sure that the materials are wrapped with carpet, blankets, or proper padding to protect polished face.
- Always strap tops to the rack and strap the rack to the truck.
- Do not allow any parts to slide around during transport.

6.2 Site Preparation

- Check accessibility.
- Ensure that all cabinets are complete an satisfactorily installed.
- Verify that all cabinets are levelled and flat within 3mm (3mm offset every 3m).
- The cabinets should be affixed to each other and then secured to the back wall.
- In case of a dishwasher, make sure that the surrounds of the cutouts have sufficient support.
- Cover all heat and AC vents near where the top is being installed.
- Clear all obstructions.
- Note electrical/plumbing positioning and any irregular wall conditions.

6.3 Fitting

When all site preparations are satisfied, it is time to fit the ConfAd® Quartz Surface to make sure everything fits correctly.

- Bring the pieces and test fit them in place on the cabinets.
Adjust as necessary to insure a good fit and proper alignment.
- Verify all pieces fit correctly against walls and cabinet sides where applicable.
There should always be about 3mm(1/8") space at all each wall for expansion and contraction of ConfAd® Quartz Surfaces.
- Verify that all overhang areas are the correct measurements and parallel to cabinets.
- Make sure all pieces are properly supported.
- All the seam areas are aligned.
- Pull the seam together to see how the seam will turn out.

If all pieces are placed properly and everything is in order, you are ready to fix the top to the cabinets.

6.4 Installation

6.4.1 Countertop Installation

- When affixing ConfAd® Quartz Surfaces to cabinets and to all supports, use only 100% silicone adhesive.
- Apply silicone adhesives every 200~300mm (8~12") at perimeter and intermediate support. Use extra adhesives on all corners and around all cutouts.
Do not use Epoxy, liquid nails or similar non flexible panel adhesives.
- Use ConfAd® Seamless Joint Adhesives to join the seams.
※ Refer to Chapter 5.6 "Seaming" on page 13 for details and instructions.
- Support is required across the top of a dishwasher space and over an under-counter oven..

6.4.2 Backsplash Installation

- Refer to Chapter 5.8 "Seaming" on page 17~18 for details and instructions

6.4.3 Sink & Bowl Installation

For all sink or bowl installations, we recommend you to follow the manufacturers' instructions.

All sink installations should be fully supported independent of ConfAd® Quartz Surface countertop.

Under no circumstances should any mechanical fasteners (screws, nails, etc.) be drilled or screwed into ConfAd® Quartz Surface.

Drop-in Sinks (Top-mount)

- Apply a bead of 100% silicone adhesive to the bottom edge of the self rimming sink flange and to the edge of ConfAd® Quartz Surface cutout.
- Place the sink into the cutout. Make certain to install the supplied clips.
- Attach clips to the sink and clamp down to the underside of the sink opening.
- Clean up any excess silicone onto the countertop.

Under-mount Sinks (Cast Iron/any rigid sinks)

- Mount the support rails inside the cabinet.
- Make sure the support holds the sink so that the top of the flange is 12mm below the underside of the countertop.
- Apply a bead of 100% silicone adhesive to the sink flange and to the bottom of ConfAd® Quartz Surface countertop at the flange perimeter edge.
- Raise the sink until it meets the bottom of the countertop.
- Position the sink equally around the cutout and tighten the rail bolts.
- Clean up any silicone onto the sink and sink opening.

Under-mount Sinks (Stainless Steel)

- Apply a bead of 100% silicone adhesive to the sink flange and to the bottom of ConfAd® Quartz Surface countertop at the flange perimeter edge.
- Place the sink equally around the cutout and install the supplied clips.
- Attach clips to ConfAd® Quartz Surface and clamp down to the underside of the sink flange.
- Clean up any excess silicone onto sink and sink opening.

6.5 Completion

- After you finish installation, thoroughly clean the countertops and the work area.
- Inspect the entire job with customers upon completion.
- We strongly recommend that you take photos of the actual installation and get your customers' written confirmation about their satisfaction with the material and workmanship at the end of the job to cover you against damages caused by others.
- Review Care and Maintenance procedures with customers and leave the Care and Maintenance manual.
- If the customers have any concerns about the work, address and try to fix any problems that customers may have before you leave.
This will minimize the return trip.
- Provide your company label or sticker to the inside cabinet door or the inside cabinet wall for future maintenance.

7. Care & Maintenance

Although **ConfiaAd®** Quartz Surface is hygienic, durable, highly resistant to stains, scratches, and heat, it can be damaged if you mistreat it.

Please follow the proper care and maintenance herein to preserve your **ConfiaAd®** Quartz Surface for many years and prevent severe damage that may cause special repairs.

1. Everyday Care

- On a regular basis, simply wipe **ConfiaAd®** Quartz Surface using a soft cloth or sponge, soap, and warm water.
- Although **ConfiaAd®** Quartz Surface is resistant to stain, for best results, clean liquid spills and stains from foods as soon as possible.
 - ※ Dark colors will show dirt, dust, rubs, fingerprints, and watermarks more than other brighter colors.
These colors will require more frequent cleaning and daily maintenance.

2. Stubborn Stain Cleaning

- For removing stubborn stain, use non-abrasive cleansers.
- For dried spills, use non-abrasive scrub pad.
Rinse thoroughly and then use a damp cloth to remove all residue.
- For any harden marks made by paint, grease, or foods, carefully use a plastic putty knife to gently scrape the surface prior to cleaning.
 - ※ Scraping by a metal blade may leave a grey mark on the surface.
 - ※ Do not use alkaline cleaning products.

3. Preventing Damage

- 1) Heat
 - Although **ConfiaAd®** Quartz Surface has excellent heat resistant properties, prolonged and extreme heat can damage the surface.
Therefore, always use a hot pad or a trivet under heat generating appliances.
- 2) Scratches
 - **ConfiaAd®** Quartz Surface is highly resistant to scratching.
However, materials harder than quartz, sharp objects can scratch it.
Always use a cutting board. Never cut or chop directly on **ConfiaAd®** Quartz Surface.
Be cautious not to drop or move heavy materials on the surface.

3) Chemical

- Avoid exposing **ConfiaAd®** Quartz Surface to strong chemicals and solvents such as paint removers, paint/stain/furniture strippers containing trichloroethane or methylene chloride, acetone, nail polish removers, bleach.
- Avoid using cleaning agents with high alkaline/pH levels (≥ 8.5) such as oven/grill cleaners, drain opener, and etc.
- Avoid using cleaning products that contain oils, powders or abrasive particles.
- Avoid using cleaners that contain xylene, toluene, potassium, hydroxide or caustic soda.

8. Warranty

8.1 Limited Residential Warranty

Jin Gwang Industries Co., Ltd. warrants to the residential owner-occupants of the original installation of **ConfAd®** Quartz Surface that **ConfAd®** Quartz Surface will be free of manufacturing defects during fifteen (15) years after the date of original installation.

Jin Gwang Industries Co., Ltd. will, at its sole option, repair or replace without charge in accordance with the following if the product fails due to manufacturing defects.

Terms and conditions

1. This warranty applies only to **ConfAd®** Quartz Surface.
2. This warranty applies only to **ConfAd®** Quartz Surface that has been permanently installed in the interior of single-family residences and has not been moved from the original installation.
3. This warranty applies only to **ConfAd®** Quartz Surface that has been fabricated and installed in accordance with the Fabrication Manual for transportation, storage, handling, fabrication, and installation.
Improper fabrication or installation is the responsibility of the fabricator/installer.
4. This warranty shall be null and void if the product and the installation have not been paid for in full.
5. This warranty applies only to **ConfAd®** Quartz Surface that has been properly maintained in accordance with Care & Maintenance available at "www.confriad.com".
6. The customers must register their warranty at "www.confriad.com" within thirty (30) days of installation to be eligible under this warranty.
7. This warranty is transferable under the following conditions.
 - 1) The original owner must have initially registered the warranty with **Jin Gwang Industries Co., Ltd.**
 - 2) The original owner must submit the name, address and phone number of the new owner in writing to **Jin Gwang Industries Co., Ltd.**
 - 3) The new owner will receive a 10-year limited warranty from the original date of installation.
8. This warranty applies to **ConfAd®** Quartz Surface purchased and installed after Sep 01, 2017.

Exclusions

This warranty shall not apply to

1. Product usage for any commercial applications.
Commercial use includes, but not limited to, use in a store, rental properties, office or any other places of business.
2. Any outdoor applications and/or exposure to UV.
3. Flooring application.
4. Improper use or abuse including damage from mishandling of the product, damage from excessive heat or uneven exposure to weather conditions, physical or chemical abuse and damage from improper care and maintenance.
5. Chips, cracks or any other impact damage.
6. Scratches: **ConfAd®** Quartz Surface is highly scratch resistant but not scratch proof. Cutting boards are highly recommended.
7. Stain: **ConfAd®** Quartz Surface is stain resistant but not stain proof.
Please refer to the care and maintenance at our website for cleaning stains.
8. Failures due to improper fabrication and/or installation.
9. Any defects that were visible at the time of fabrication/installation and were not avoided during fabrication/installation. Fabricators/Installers are required to perform an inspection of all materials prior to fabrication and again prior to installation.
10. Failures due to inadequate support for the installation.
11. Damage as a result of dry cutting or polishing.
12. Seam appearance, seam performance, adhesives, caulk or other accessory items.
13. Alterations to the factory applied surface finish in any way.
14. Additional repair or modifications, including but not limited to plumbing, electrical, tile, cabinets, and wall surfaces that may be necessary to repair and/or replace the **ConfAd®** Quartz Surface.
15. Temporary marks on **ConfAd®** Quartz Surface such as metal marks, fingerprints or other temporary marks by daily living.
16. Thermal shock and exposure to excessive heat. Trivets and heat resistant pads must be used.
17. Blemishes or spots are inherent in the manufacturing process. Blemishes larger than the size of a US twenty-five cent piece are covered under this warranty.
18. Any creative use of material including bending or curving.

19. Any damage caused by the installation of sinks.
20. The securing of any type of mechanical fasteners directly into the material.
21. Natural variations in color, gloss, shape, size, and distribution of particulates or natural variations in background color. Color samples provided to consumers, dealers and fabricators are only representative and are not an exact replica of what will be installed in your home.
22. If the customers decide that they do not like the colors, shade, pattern, or have any other opinions based on personal preference during or after installation, this is not covered under this warranty.

Jin Gwang Industries Co., Ltd. is not responsible for damage or injury caused in whole or part by acts of God, job site conditions, architectural or engineering design, structural movement, acts of vandalism, or accidents.

No other express or implied warranties of merchantability or fitness for a particular purpose are made by this warranty except for those expressly provided herein. Under no circumstances shall **Jin Gwang Industries Co., Ltd.** be liable for any loss or damage arising from the purchase, use or inability to use this product, or for any special, indirect, incidental or consequential damages. In no case will **Jin Gwang Industries Co., Ltd.** be liable for labor to remove and/or reinstall **ConfAd®** Quartz Surface, or other similar activities necessary to complete the replacement or removal of the defective material.

This warranty entitles the purchaser to specific legal rights. Other rights may also be available, which may vary from state to state. Some states do not permit the exclusion or limitation of implied warranties or of incidental or consequential damages, so the above limitation or exclusion may not apply to you. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

To obtain service under warranty, please contact the company who sold you **ConfAd®** Quartz Surface. You must provide the original receipt along with proof of purchase and installation of the product that clearly indicates the product purchased and installation dates to obtain service under this warranty. **Jin Gwang Industries Co., Ltd.**'s authorized agents or certified installer must be permitted sufficient time and opportunity to inspect your **ConfAd®** Quartz Surface, evaluate, and respond to any claims. If the problem is not handled to your satisfaction, please contact our representative directly by writing or calling:

Jin Gwang Industries Co., Ltd.

11-13 Maejari-gil, Opo-eup, Gwangju-si, Gyeonggi-do, 12798, Korea

Tel: +82-31-767-8441

www.confriad.com

8.2 Limited Commercial Warranty

Jin Gwang Industries Co., Ltd. warrants to the original owner of the original installation of **ConfiaAd®** Quartz Surface that **ConfiaAd®** Quartz Surface will be free of manufacturing defects during ten (10) years after the date of original installation.

Jin Gwang Industries Co., Ltd. will, at its sole option, repair or replace without charge in accordance with the following if the product fails due to manufacturing defects.

Terms and conditions

1. This warranty applies only to **ConfiaAd®** Quartz Surface.
2. This warranty applies only to **ConfiaAd®** Quartz Surface that has been permanently installed in commercial occupied structures and has not been moved from the original installation.
3. This warranty applies only to **ConfiaAd®** Quartz Surface that has been fabricated and installed in accordance with the Fabrication Manual for transportation, storage, handling, fabrication, and installation.
Improper fabrication or installation is the responsibility of the fabricator/installer.
4. This warranty shall be null and void if the product and the installation have not been paid for in full.
5. This warranty applies only to **ConfiaAd®** Quartz Surface that has been properly maintained in accordance with Care & Maintenance available at "www.confriad.com".
6. The customers must register their warranty at "www.confriad.com" within thirty (30) days of installation to be eligible under this warranty.
- 7. This warranty is not transferable.**
8. This warranty applies to **ConfiaAd®** Quartz Surface purchased and installed after Sep 01, 2017.

Exclusions

This warranty shall not apply to:

1. Any outdoor applications and/or exposure to UV.
2. Flooring application.
3. Improper use or abuse including damage from mishandling of the product, damage from excessive heat or uneven exposure to weather conditions, physical or chemical abuse and damage from improper care and maintenance.
4. Chips, cracks or any other impact damage.

5. Scratches: **ConfiaAd®** Quartz Surface is highly scratch resistant, but not scratch proof. Cutting boards are highly recommended.
6. Stain: **ConfiaAd®** Quartz Surface is stain resistant, but not stain proof.
Please refer to the Care and Maintenance at our website for cleaning stains.
7. Failures due to improper fabrication and/or installation.
8. Any defects that were visible at the time of fabrication/installation and were not avoided during fabrication/installation. Fabricators/Installers are required to perform an inspection of all materials prior to fabrication and again prior to installation.
9. Failures due to inadequate support for the installation.
10. Seam appearance, seam performance, adhesives, caulk or other accessory items.
11. Alterations to the factory applied surface finish in any way.
12. Additional repair or modifications, including but not limited to, plumbing, electrical, tile, cabinets, and wall surfaces that may be necessary to repair and/or replace the **ConfiaAd®** Quartz Surface.
13. Thermal shock and exposure to excessive heat. Trivets and heat resistant pads must be used.
14. Blemishes or spots are inherent in the manufacturing process. Blemishes larger than the size of a US twenty-five cent piece are covered under this warranty.
15. Any creative use of material including bending or curving.
16. Any damage caused by the installation of sinks.
17. Natural variations in color, gloss, shape, size, and distribution of particulates or natural variations in background color. Color samples provided to consumers, dealers and fabricators are only representative and are not an exact replica of what will be installed.

Jin Gwang Industries Co., Ltd. is not responsible for damage or injury caused in whole or part by acts of God, job site conditions, architectural or engineering design, structural movement, acts of vandalism, or accidents.

No other express or implied warranties of merchantability or fitness for a particular purpose are made by this warranty except for those expressly provided herein. Under no circumstances shall **Jin Gwang Industries Co., Ltd.** be liable for any loss or damage arising from the purchase, use or inability to use this product, or for any special, indirect, incidental or consequential damages. In no case will **Jin Gwang Industries Co., Ltd.** be liable for labor to remove and/or reinstall **ConfiaAd®** Quartz Surface, or other similar activities necessary to complete the replacement or removal of the defective material.

This warranty entitles the purchaser to specific legal rights. Other rights may also be available, which may vary from state to state. Some states do not permit the exclusion or limitation of implied warranties or of incidental or consequential damages, so the above limitation or exclusion may not apply to you. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

To obtain service under warranty, please contact the company who sold you **ConfiaAd®** Quartz Surface. You must provide the original receipt along with proof of purchase and installation of the product that clearly indicates the product purchased and installation dates to obtain service under this warranty.

Jin Gwang Industries Co., Ltd.'s authorized agents or certified installer must be permitted sufficient time and opportunity to inspect your **ConfiaAd®** Quartz Surface, evaluate, and respond to any claims. If the problem is not handled to your satisfaction, please contact our representative directly by writing or calling:

Jin Gwang Industries Co., Ltd.

11-13 Maejari-gil, Opo-eup, Gwangju-si, Gyeonggi-do, 12798, Korea

Tel: +82-31-767-8441

www.confriad.com**ConfiaAd®**

9. Technical Data

Properties		Typical Results	Test Method
Specific Gravity		2.34	ASTM D792
Tensile Strength		28.5 MPa (4,130 psi)	ASTM D638
Flexural Strength		60.4 MPa (8,760 psi)	ASTM D790
Flexural Elastic Modulus		29.7 GPa (4.3x10 ⁶ psi)	
Compressive Strength		Dry: 209 MPa (30,310 psi) Wet: 202 MPa (29,300 psi)	ASTM C170
Hardness Test	Moh's	9	Moh's Hardness Scale
	Rockwell	114	ASTM D785
	Barcol	88	ASTM D 2583
Izod Impact Strength		20 J/m	ASTM D256
Water Absorption		0.007%	ASTM D570
Linear Thermal Expansion		1.7x10 ⁻⁵ /°C	ASTM D696
Flammability	Class	A	ASTM E84
	Flame Spread	5	
	Smoke Density	130	
Abrasion Resistance		950mg	ASTM D4060
Freeze-Thaw Cycling		No Damage	ASTM C1026
Stain Resistance		Pass	ANSI Z124.6
Chemical Resistance		Pass	ANSI Z124.6
Boiling Water Resistance		No Effect	NEMA LD 3-3.5
High Temperature Resistance		No Effect	NEMA LD 3-3.6
Slip Resistance (Static Coefficient Friction)		Dry: 0.79 Wet: 0.50	ASTM C1028
Fungal & Bacterial Resistance		No Growth	ASTM G21

10. MSDS

1. Product and Company Identification

- 1) Product Name: **ConfiaAd[®]** Quartz Surfaces
- 2) Company
 - a) Name: Jin Gwang Industries Co., Ltd.
 - b) Address: 11-13 Maejari-gil, Opo-eup, Gwangju-si, Gyeonggi-do, 12798, Korea
 - c) Emergency telephone: +82-31-767-8441

※ E-mail address of the competent person responsible for the Material Safety Data Sheet : confiad@confiad.com

2. Hazards Identification

ConfiaAd[®] Quartz Surface is not hazardous.

However, operations such as sawing, routing, drilling and sanding can generate dust.

High concentrations of dust can irritate eyes, nose and respiratory tract and cause coughing and sneezing.

Dust generated during handling of this product can contain particles of crystalline silica.

Over exposure to airborne crystalline silica can cause silicosis, symptoms of which include difficulty in breathing, wheezing, coughing, and impairment of lung function.

3. Composition / Information on Ingredients

Component	Percentage (%)	CAS Number
Quartz	87~93	14808-60-7
Resin	7~10	
Other Additives	0~3	

4. First Aid Measures

4.1. General advice: Never give anything by mouth to an unconscious person.

4.2. Eye contact: In case of contact with dust, rinse thoroughly with large amounts of water at least 15 minutes.

4.3. Skin contact: Not Applicable

4.4. Inhalation: If large amounts of dust are inhaled, move to fresh air.

4.5. Ingestion: Not Applicable

4.6. Most Important Symptoms and Effects, Acute and Delayed

: Symptoms of silicosis include coughing, difficulty breathing, wheezing and progressive impairment of lung function.

5. Firefighting Measures

5.1. Flammable Properties: Non-flammable

1) Flash Point: Not Applicable

2) Auto-ignition Temperature: Not Applicable

5.2. Extinguishing media: Water spray, dry powder, carbon dioxide(CO₂), foam

6. Accidental Release Measures

Review “**Firefighting measures**” and “**Handling and storage**” sections before proceeding with clean-up.

Use appropriate personal protective equipment during clean-up.

7. Handling and Storage

7.1. Handling

1) Unloading/Moving

Since **ConfAd®** Quartz Surface is very heavy, it must be unloaded and moved by proper handling equipment.

2) Machining

Do not breathe dust. Do not breathe fumes generated during processing.

Minimize dust generation and accumulation.

If fabricators generate dust, make sure to proceed to the job at the well ventilated area only.

7.2. Storage

Store in a cool and well-ventilated area. Avoid exposure of direct sunlight

8. Exposure Controls / Personal Protection

8.1. Engineering controls

Provide for appropriate exhaust ventilation and dust collection at machinery.

※ Exposure Limits

Component	ACGIH	NIOSH	OSHA
Silica, Crystalline (Quartz)	0.02mg/m ³ TWA (Respirable Friction)	0.05mg/m ³ TWA (Respirable Friction)	Respirable: 0.1mg/m ³ TWA Total Dust: 0.3mg/m ³ TWA

※ **ACGIH:** American Conference of Governmental Industrial Hygienists

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

8.2. Personal Protection

1) Respiratory protection

: In case of insufficient ventilation, wear appropriate respiratory equipment in compliance with local regulations.

2) Hand protection: Wear protective gloves.

3) Eye protection: Wear safety goggles or face-shield.

4) Others: Safety shoes are recommended whenever handling large pieces of the sheet. Ear protection may be required during machining operations.

9. Personal Protection

9.1. Appearance: Solid

9.2. Color: Varies

9.3. Odor: None

9.4. pH: Not Applicable

9.5. Water Solubility: Insoluble

9.6. Boiling Point: Not Applicable

9.7. Melting Point: Not Applicable

9.8. Specific Gravity: 2.3~2.5 g/cm³

9.9. Vapor Pressure: Not Applicable

9.10. Vapor Density: Not Applicable

9.11. Flash Point: Not Applicable

9.12. Ignition Temperature: Not Applicable

9.13. Explosion Limit: Not Applicable

10. Stability and Reactivity

- 10.1. Stability:** Stable at normal temperatures and storage conditions.
- 10.2. Conditions to avoid:** Extreme heat, spark and fire
- 10.3. Hazardous decomposition products:** N/A
- 10.4. Polymerization:** Polymerization will not occur in solid state.

11. Toxicological Information

- 11.1 Acute toxicity:** Not classified
- 11.2 Skin corrosion/irritation:** Not classified
- 11.3 Eye corrosion/irritation:** Not classified
- 11.4 Respiratory or skin sensitization:** Not classified
- 11.5 Germ cell mutations:** Not classified
- 11.6 Carcinogenicity**

Material	IARC group	National Toxicology Program (NTP)
Quartz (14808-60-7)	1 (Carcinogenic to humans)	2 (Known Human Carcinogens)

- 11.7 Reproductive toxicity:** Not classified
- 11.8 Specific target organ toxicity (single exposure):** Not classified
- 11.9 Specific target organ toxicity (repeated exposure):** Not classified
- 11.10 Aspiration hazard:** Not classified

12. Ecological information

This product has no known ecotoxicological effects.

13. Disposal Consideration

Can be landfilled or incinerated, when in compliance with local regulations.

14. Transport information

Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

U.S. Federal Regulations

TSCA Inventory Status: In compliance with TSCA Inventory requirements for commercial purposes.

16. Other information

Note for users

The information contained in the present sheet is based on our own knowledge, information and belief at the date of the last version.

The information given relates only to the specific material designated herein and does not relate to use in combination with any other materials or in any process.