Durasein
Shower and Tub
Wall Installation

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Introduction

Durasein® solid surface is a practical material for shower stalls and tub walls. With proper preparation and installation, it will provide a durable, easy-to-clean surface that resists moisture and mold and microbe growth. This guide will walk you through the correct methods for preparing and installing these applications.

Safety First

When fabricating shower walls, all workers should be protected with the following equipment:

- Safety glasses with side shields or goggles
- Ear protection for sawing, routing, and sanding
- Work gloves
- Safety shoes
- Dust mask, local ventilation, and dust collection system for cutting and sanding

In addition, please follow these important guidelines:

- Use adequate ventilation when applying adhesives or denatured alcohol.
- Carry sheets vertically, one at a time.
- Consult local, state or federal agencies for other health and safety requirements.

Get Ready

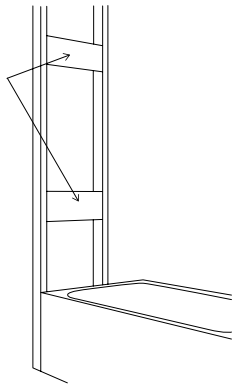
Follow these simple steps to lay the foundation for a successful project.

1. Review all of the instructions before installation, including this entire guide and the manufacturer's instructions for your shower pan.
2. Inspect the site and make sure it is suitable for installation.
   - Do not install solid surface in steam baths or saunas.
   - All existing surfaces should be dry and structurally sound. Never install solid surface panels directly on drywall, masonry, concrete, cinder block, or any wall that may become damp. This may degrade the substrate material and/or cause the adhesive bond between the substrate and solid surface to fail. You may install solid surface over tilework as long as the tiles and backing board are completely dry and sound.
   - Inspect the subfloor to make sure it is solid, level, and free of any debris or damage. Repair any weak or damaged areas.
   - Check if the subfloor is level. If necessary, use a self-leveling compound or shims to level it. This is crucial for adequate drainage and to prevent the shower pan from rocking or cracking.

Build a Frame

This step is only necessary for new construction or sites where you plan to add a substrate.

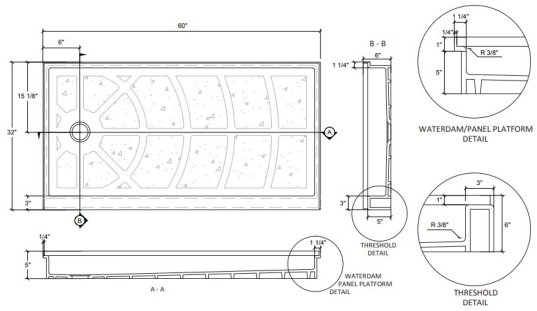
1. Stud out the wall with 2" x 4"s or other code-approved lumber
2. To provide support for plumbing hardware, grab bars, or other surface mounted accessories, install 2" x 6" wood blocking behind the areas that will hold the screws.
3. Check to make sure that studs, plumbing, wiring or other items are not interfering with the cutout or hardware location for shower accessories.



Install the Shower Pan

This part of the project needs to be in place before you install the solid surface panels.

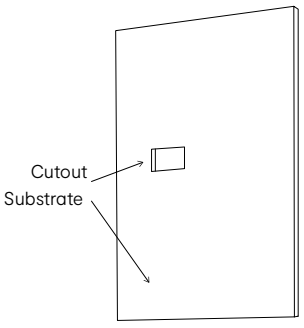
1. Start by gathering the following tools.
   - Shower pan
   - Mortar mix (preferred for the base)
   - Bucket for mixing
   - Notched trowel
   - Level
   - Tape measure
   - Utility knife
   - Silicone caulk
   - Screws (if securing a flange)
   - Screwdriver or drill
   - Shims (optional)
   - Drain assembly kit
   - Pipe wrench or adjustable pliers
2. Place the shower pan on the subfloor to ensure it fits properly and the drain hole aligns with the drainpipe. Adjust if necessary.
3. Use a level to check if the pan sits evenly. If it doesn't, use shims to adjust.
4. Follow the instructions provided with your shower pan or drain kit to assemble the drain components.
5. Attach the drain flange to the shower pan using silicone caulk to create a watertight seal. Tighten the flange securely.
6. Mix the mortar in a bucket. You want a thick, mud-like consistency that can hold its shape when troweled.
7. Spread a generous layer of mortar on the subfloor, staring in the center and feathering it out to create even support. Ensure the layer is thick enough to fill gaps and create a level base.
8. Use a notched trowel to smooth the mortar.
9. Lower the shower pan into place, aligning it with the outline and drainpipe. Press it down firmly to ensure good contact with the mortar.
10. Immediately check that the pan is level. If necessary, add more mortar or adjust with shims under the pan edges.
11. If additional screws or nails at the flanges are needed, follow the manufacturer's instructions to install them.
12. Apply plumber's putty or silicone to the drain flange.
13. Insert the drain assembly into the shower pan and tighten securely.
14. Plug the drain and fill the pan with water. Check for leaks around the drain and edges, and drain the water once confirmed watertight.



Install the Substrate

If you are adding a substrate, follow these instructions:

1. Choose a substrate material from the list below.
   - Moisture-resistant (MR) drywall
   - Tile backer board
   - Moisture-resistant plywood for specialty applications
2. If your project has recessed accessories, make sure studs and plumbing will not interfere with their placement. Then locate, mark and make cutouts for the accessories in the substrate material.
3. Install the substrate above the shower pan, extending down to the edge of the pan. Allow a ½" (12mm) gap between the top edge of the shower pan and the bottom of the wall board to prevent moisture from wicking up behind the shower walls.



Inspect the Durasein® Solid Surface Panels

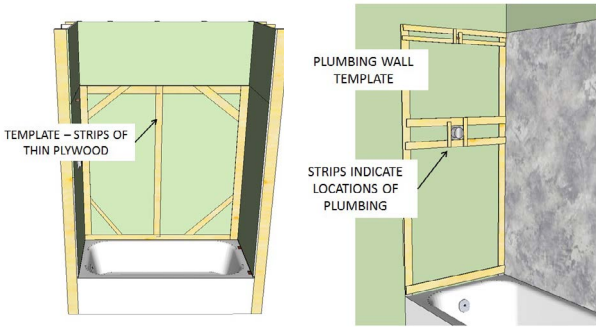
1. Review the job to make sure design and color details are correct.
2. Note any directional aesthetics and make sure customers understand them, especially pattern and color matches at seams and corners.

Measure and Template Durasein® Solid Surface Panels

1. Establish the height measurements for all the wall panels.
2. Mark level lines on the walls to indicate the top of each wall panel.
3. Establish the vertical lines for each panel.
4. Leave a 1/16" (1.5mm) gap at each corner to allow for expansion and contraction of the panels.
5. Cut templates from thin wood strips to determine the actual size and shape of each wall panel.

Cut and Scribe the Durasein® Solid Surface Panels

1. Always wear appropriate gloves, eye protection and other appropriate PPE when cutting and scribing.
2. Use a rail saw with a high-quality carbide solid surface blade to achieve straight, accurate, chip-free cuts.
3. When making cutouts, create a template from plywood or MDF, and use a router.
4. Over-size the cutouts by at least 1/8" (3mm) all around to allow for expansion and contraction. Holes for accessories should also be drilled 1/8" (3 mm) larger than their mounting screws.
5. Make all inside corners with a minimum ¼" (6mm) radius, and sand all edges smooth to reduce the chance of stress cracks and make handling safer.

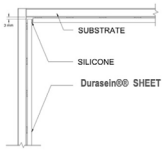


Seam Panels

To wrap corners or cover large expanses, you will need to seam the panels. (For large walls, take advantage of Durasein® Wide Sheets to minimize seaming.) Choose from multiple seaming techniques for desired appearance, ease of installation, and fabrication cost.

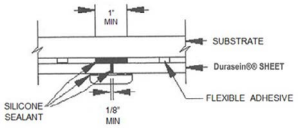
Flexible Seam

- What it is: A butt seam with a silicone joint.
- Where to use it: As a control joint to allow for expansion and contraction of the sheets. A flexible seam must be used at least once in applications where vertical returns create an enclosed shape, such as a three-sided solid surface shower. The inside corner is always constructed with the flexible detail, and outside corners may be constructed with a flexible or hard seam.
- Pros: Strong, flexible, and easy to install.
- Cons: Less tidy-looking and may need future maintenance. Aligning the two abutting sheets can be difficult, so this type of seam usually has a round-over or chamfer at the edge of the sheet that adjoins the seam.



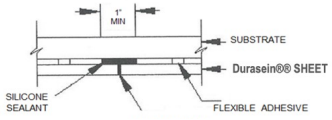
Batten Seam

- What it is: A flexible seam with a batten strip of solid surface applied over the seam area.
- Where to use it: Anywhere you would use a flexible seam, or where you want an accent in a different color of material.
- Pros: Strong, flexible, and easy to install.
- Cons: Less tidy-looking and may need future maintenance.



Hard Seam

- What it is: A butt or tongue-and-groove seam that is joined with the approved joint adhesive.
- Where to use it: Anywhere you want a monolithic look (unless you are using Durasein® Wide Sheets, which may not need to be seamed).
- Pros: Durable and inconspicuous.
- Cons: Requires more labor, though tongue-and-groove joints can save significant time in aligning and sanding.

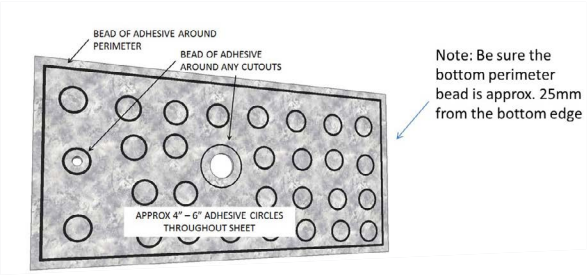


No matter which seaming method you choose, use with the following guidelines for best results:

- Check panels to ensure that the color and direction match.
- Keep your work bench flat and level.
- Take care to machine accurately to assure a good fit.
- Dry fit the adjoining panels before seaming, checking for flatness (no lippage).

Install the Durasein® Solid Surface Panels

1. When the panels are ready, install them in the following order:
   a. back wall
   b. side wall without plumbing
   c. plumbing wall
2. Take time to trial-fit all panels before applying adhesive.
3. Clean the sheets and installation area with denatured alcohol and a clean rag.
4. Place a continuous bead of silicone 1" to 2" (25 mm to 50 mm) from the edge around the perimeter of the panel.
5. Apply 4 – 6" (100-150mm) diameter circles of silicone over the remaining area of the wall panel.
6. Apply circles of silicone around any cutouts, about 1" (25mm) from the edge of the cutout.
7. Apply hot melt glue in appropriate places on the wall just before you are ready to install the panel, and press the panel firmly into place.
8. Position the wall panel on the substrate and press firmly. Use a straightedge or level to push on the panel. If needed, hot melt glue may be used to hold the wall panel in place temporarily until the silicone cures.
9. Repeat this procedure for the remaining wall panels.
10. Clean with denatured alcohol or clear Windex.

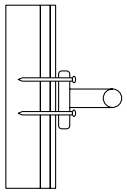


To Connect Multiple Shower or Toilet Stalls
Specialty hardware is available to facilitate installation.

Attach Accessories

Grab bars and handles

1. Hold the grab bar against the wall at the desired position.
2. Mark the screw hole locations on the wall through the grab bar's mounting plate.
3. Place masking tape on the panel to prevent the drill bit from slipping.
4. Use a standard drill bit to drill through the surface. The bit needs to be 1/8" (3mm) larger in diameter than the mounting screws.
5. Align the grab bar with the pilot holes.
6. Insert screws through the grab bar's mounting holes and tighten into the studs. Use a screwdriver or drill with a low torque setting to avoid overtightening.



Corner shelves and caddies

1. Adhere the accessories to the walls with silicone.
2. Caulk around the perimeter with silicone.

Recessed caddies and soap shelves

1. Fabricate with a router and template or a power drill equipped with a hole saw.
2. Round over cutout edges and sand smooth.

Add Trim Strips

In some installations, scribing can be eliminated by covering the seam with trim pieces. This minimizes time on site and provides additional waterproofing.

To use trim strips:

1. Measure, mark, and cut trim strips to length.
2. Clean each trim strip and the panel with denatured alcohol
3. Apply silicone and small dabs of hot melt glue to the trim strip and push it firmly into place.
4. Hold the strip in place until the hot melt adhesive is rigid.
5. Immediately clean off excess silicone with clear Windex® or denatured alcohol.
6. After the silicone has cured, place a small bead of silicone around the accessory for additional support.

Final Steps

Congratulations, the job is almost complete! Before you leave the site, be sure to go over the following:

1. Run a post-installation checklist to make sure you've completed every step.
2. Make sure the customer is satisfied.
3. Review care, cleaning, and other important details with the customer.
4. Give the customer a copy of the Durasein® solid surface warranty.