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Durasein
Tools & Supplies



Durasein

Fabrication and Installation Tools & Supplies

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TECH INFO
Tools & Supplies

Introduction

Durasein® Solid Surface material can typically be machined with ordinary woodworking tools, such as circular saws, table saws, routers, drills and sanders. For productivity and industrialization, other equipment such as vertical and horizontal panel saws, V-grooving equipment, thermoforming equipment, CNC routers and other task-specific machinery can be utilized. For most applications blades and bits should be carbide tipped. For more advanced applications, solid carbide and diamond tooling can be considered.

The following tools are not appropriate for fabricating solid surface materials and should not be used for fabrication and installation of Durasein® products:

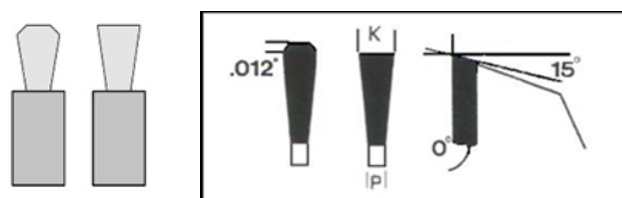
- Jig saws
- Ripping & Combination Blades
- Reciprocating saws
- Hack Saws
- Rotary Cutters
- Auger Bits



Belt sanders are not to be used on finished surfaces of Durasein® Solid Surface.

Tooling manufacturers have developed specific types of blades and bits for the fabrication of solid surface products.

Traditional ripping or combination blades using an alternate top bevel grind will cause rough cuts and chipping. Always use “triple chip” blades or similar styles that are specifically designed for use on solid surface materials.



Typical Examples of the Triple Chip Grind & “Cobra Cut”

The triple chip blades have a tooth arrangement of alternating profiles as shown here. Check with the blade supplier to ensure suitability for solid surfacing.

Table Saws

A table saw with a minimum 3 HP motor should be used for cutting the solid surface material. The sheets should be cut face up. A good quality rip fence is necessary for accuracy. For larger pieces and/or better productivity, sliding table saws and vertical panel saws are recommended. Follow all recommendations for solid surface circular saw blades

Circular Saws with Straight Edges

For work in the field, there are several types of systems that include a hand-held circular saw with high-quality straight edges. These can produce excellent cuts on solid surfacing when operated properly with the right tooling. Be sure to follow all tool manufacturer safety and operational recommendations.



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Router & Bits

For general-purpose routing, a 1 1/2 to 2 HP router may be used. For heavier cutting of thick edges and cut outs a 3 1/4 HP router is recommended. A 1/2" (12 mm) shank carbide bit is needed to minimize chatter for all routing with the exception of small details like a 1/4" (6 mm) round over or a pin stripe inlay. Most manufacturers recommend a double-fluted 1/2" bit for producing a high-quality cut for seams. In some circumstances a 3/8" single flute carbide bit can be used for utility cutting with a router. The reduced width saves material and energy on the cut and, for most cases, produces a fine quality cut. With a good router & straightedge system, the 3/8" bit can produce a seam-quality cut but is highly dependent on the skill of the operator.

Miter Saws

A triple chip bevel solid surface saw blade should be used for clean cuts. Generally, these saws require a 10" (254 mm) diameter blade with 60-80 teeth or a 12" (305 mm) diameter blade with 70-100 teeth. All blades need to be manufactured specifically for use with solid surface products.

Dust Control

For both health and quality considerations, good dust control is a top priority.

Sanders

For finishing Durasein® Solid Surface countertops, good-quality random-orbital sanders are recommended.

Vacuum Clips

Seam quality and reduced labor are the two important results that are received when using vacuum clamps.

Here is a basic list of typical tooling & supplies used during fabrication and installation of Durasein® products:

- 1/16" shims (laminat samples or similar)
- Appropriate grit sandpapers (120, 180 and 240 grits or similar) and polishing pad
- Bar clamps
- Belt sander (for scribing only). Do not use belt sanders on the surface of Durasein® materials.
- Carpenter's square
- Caulking gun
- Circular saw with straightedge rail and solid surface blade
- Clean, white rags, paper towels
- Color-appropriate silicone caulk
- Combination square
- Denatured alcohol
- Drywall square for panel layout
- Dust extractor (shop vacuum – preferably 2-stage filtering)
- Dust mask
- Extension cord(s)
- Flexible panel adhesive
- General purpose spray cleaner
- Glue blocks & clamps for hard-seaming sheets
- Glue gun and hot-melt glue
- Hearing protection
- Levels (2 foot, 4 foot and 6 foot)
- Masking tape
- Pencil(s)
- Portable work station (sawhorses with 2 x 4 rails or other suitable work table)
- Power drill with hole saw(s)
- Random orbital sander for finishing
- Roundover router bit for exposed finished edges
- Router and bit for making cutouts
- Safety glasses or protective goggles
- Sheets of plastic film, tarps, and or drop cloths
- Spring Clamps
- Suction cups for panel lifting
- Tape measure
- Templates for making cutouts
- Utility knife
- Vacuum Clamps for Seams



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