

DURCON EPOXY

MATERIAL GUIDE

DURCON
A WILSONART COMPANY

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INTRODUCTION

This guide provides instruction for Durcon Epoxy lab-grade worksurfaces and sinks from the time they are delivered through the routine upkeep of the material. It outlines the correct methods for ensuring this unique material remains safe, attractive and effective for the duration of its lifespan.

Recommended Uses

Durcon A Wilsonart Company® epoxy resin is widely considered the industry standard for high quality lab-grade worksurfaces and sinks. Epoxy's resistance to chemicals and durable nature makes it ideal for use in K-12 and university labs as well as research and development environments in the medical, government, pharmaceutical industries and more.

HANDLING & STORAGE

Handling

Special care should be taken when handling epoxy worksurfaces and sinks to protect employees as well as the aesthetic properties of the product. Always use two people and practice proper lifting techniques when handling worksurfaces to avoid breakage and damage. Lift pieces individually to avoid scratching. Large pieces should be transported by pallet, fork-truck, rolling table or vacuum lifts.

To view our *Best Practices in Materials Handling* instructional video, scan the QR code below.

Additional tips include:

- Place padding (slip-sheet or protective cardboard strips) between pieces when stacking.
- Use pallets larger than pieces during transportation.
- Carry pieces vertically to limit flex and possible breakage.



Storage

Store products in manufacturer's unopened packaging until ready for installation, in an enclosed area protected from ultraviolet light. Use protective dividers to avoid damage to surfaces. If protective film is provided, do not remove until panel has been installed. Remove labels immediately after installation.

Never store material directly on the floor - store horizontally with the top sheet facing down in order to protect the material from damage, and to reduce the chance of possible warpage to the top sheets. Good circulation and air movement is recommended around the material. It is recommended **NOT** to carry pieces flat, but rather turn the sheet on its side.

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PRE-INSTALLATION

Once the pieces have reached the job site, handle them with great care. If a work surface or sink is scratched or damaged when received, do not install and contact Durcon immediately.

Installation Timing

It is best practice to install the work surfaces in the final stages of construction. Keep the protective film intact and cover with a cloth for protection until the project is fully completed. This reduces the risk of damage by tools, or use of the tops as workbenches or scaffolding. Be sure to store all work surfaces flat and protected, and do not lean against the wall as they may warp.

Tools & Helpful Items

Before beginning the work, you will want to have the following items on-hand in order to make your installation go as smoothly as possible.

- Shop drawings or truck drawings
- **Durcon Installation Kit** (includes caulk tubes, finishing pads & beefcloths)
- Safety glasses
- Putty knives
- Level
- Multiple C-clamps
- 2 inch wide masking tape
- 2-part (A & B) epoxy adhesive (other sealants such as lab grade silicone are acceptable)
- Durcon Color Matched Caulk (optional, use for an aesthetic finish)
- Multiple applicator sticks
- Lacquer thinner
- Several pieces of hardwood blocking
- Tapered shims made of wood or similar material
- Several pieces of cardboard in varying sizes
- 2 or 3 pieces of lumber, at least 1.5x the width of the cabinet
- Scotchbrite® Light Duty white finishing pads
- Distilled water
- Several clean rags

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Take time to inspect all cabinet runs to ensure they are level.

Have shop drawings or truck drawings easily accessible to reference the location of each top in the room.

Dry-Fitting

Study the worksurface layout included with the shipment and properly place all pieces. Each piece is labeled to correspond with the layout.

Place the worksurface pieces on the cabinets and slide them into place. Be cautious to prevent anything abrasive from coming into contact with the worksurfaces.

When installing worksurfaces with undermount sinks, line the sinks up below the proper cutouts with an even overhang on all sides.

Put the curbs in place and ensure they are the correct length.

After you have checked the cabinets and inspected the pieces, you are ready to begin installing.

Note: In the case of damaged, malformed or missing pieces, please notify Durcon immediately. Inspect each section of the worktop before applying adhesive. Durcon will not be responsible for removal of adhered defective tops.

Mixing Adhesive

Two-part epoxy adhesive is the most important material used in installing worksurfaces, and properly mixing it together is a critical step.

Mix only what you need for the number of pieces at hand, using a clean piece of cardboard.

Always use a separate applicator stick to scoop each part of the epoxy adhesive, and use the same stick each time to avoid contaminating the unused portion.

Begin with the dark pigment epoxy and mix the white material in thoroughly.

Spread the mixed epoxy adhesive in a layer about 0.25" thick on the cardboard to prevent it from generating its own heat and drying too quickly.

WORKSURFACE INSTALLATION

Setting Pieces

With two worksurface pieces, form a completely flat surface using a straight edge or level. If necessary, use shims to adjust the height of either piece.

Lift and prop up the first two pieces, and place small dabs of adhesive in intervals every 24" (610mm) along the front and back edges of the cabinet top below the first worksurface piece. Then remove the wood prop and lower the worksurface into place.

Put a few dabs of adhesive along the lower edge of the first piece where the next piece will abut.

Repeat the steps above for the second worksurface piece and carefully lower it into place, leaving a 0.125" (3mm) to 0.0625" (1.5mm) seam between the pieces.

Repeat this process for the remaining worksurface pieces in each run.

Filling Seams

Apply a length of 2" (50mm) wide masking tape to each side of the seam, directly on the edge of the joint.

Using a putty knife, press the adhesive down and into the seam. Using too much adhesive is better than not using enough.

Beginning at the back of the worksurface, drag the putty knife toward you holding it at a 45° angle. Scrape any excess adhesive off the masking tape approximately 0.0625" (1.5mm) from the center of the seam on both sides.

Drag a clean putty knife across the masking tape one more time, then remove the tape.

Use lacquer thinner on a clean rag to smooth out the adhesive for finished seams, then a separate clean rag (damp or dry) to wipe away any excess adhesive.

Note: Never attempt to sand seams or scratches.

Allow adhesive to harden overnight (at approximately 77°F / 25°C).

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Curb Installation

Cover the worksurfaces with cardboard to protect against scratching, and place the curbs upside down on the cardboard.

Fill a putty knife with adhesive and, in a smooth stroking motion, run a bead along the bottom of the curb and along the edge that abuts another curb.

Set the curbs in their proper location and press into place. If you have uneven walls you will need to shim the curbs to have an even front. If you have a bow in the wall you can eliminate the problem with a prop and clamp.

Wipe off excess adhesive at the bottom of the curbs with a rag dipped in lacquer thinner or distilled water.

To ensure worksurfaces and curbs are secured in place, block and clamp the seams and allow the adhesive to harden overnight.

SINK INSTALLATION

Durcon DropIn® Sinks

Lower the sink into the cutout and inspect the fit.

Using a rag dipped in lacquer thinner, clean the rim of the DropIn sink, and the area around and inside the rabbeted worksurface cutout.

Remove the sink and apply adhesive around the surface of the rabbeted cutout.

Carefully lower the sink back into the cutout.

Gently press the sink rim until it is level with the bottom of the 0.125" (3mm) cutout bevel.

Use a rag dipped in lacquer thinner or distilled water to wipe away excess adhesive, and allow adhesive to harden overnight.

Cupsinks

Clean the rim of the cupsink, and the area around and inside the worksurface or fume hood base cutout with lacquer thinner.

Note: If installing Durcon Polypropylene Cupsinks, scuff the contact surfaces under the sink rim to increase adhesion.

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Position the blocking mechanism used to hold the cupsink in place.

Note: Create a blocking mechanism by using wire to connect a large wood block and a smaller wood block through cupsink outlet.

Twist smaller block to achieve enough tension to hold cupsink level with worksurface top when in place.

Apply a dab of epoxy adhesive on all four sides of the cutout in worksurface.

Position cupsink directly over the worksurface cutout and lower into position.

Center the sink (the blocks will hold it level) and allow the epoxy adhesive to harden overnight.

After the epoxy adhesive has hardened, remove support blocks and carefully fill in the sealant seam with adhesive.

Use a rag dipped in lacquer thinner or distilled water to smooth off the seam. Use a clean rag (damp or dry) to wipe away any excess adhesive, and allow adhesive to harden overnight.

Undermount Sinks

Before installing, check to see that the sink fits properly on sink supports provided by your cabinet supplier: **Durcon does not provide sink supports.**

Using a level, check to ensure the top of the undermount sink is flush with top edge of cabinet, and adjust sink supports from under the sink, if necessary.

After the sink is positioned, be careful not to move it as you set the worksurface.

Wipe rim of sink and contact points on the bottom of the worksurface with a rag dipped in lacquer thinner or distilled water.

Apply a small bead of silicone sealant to the top edge of the sink.

Apply a dab of epoxy adhesive at each corner of the sink cabinet.

Place a bead of silicone under the inside of the sink cutout, and the sink.

Carefully lower the worksurface into place, then follow the steps outlined in the **Filling Seams** and **Curb Installation** sections of **WORKSURFACE INSTALLATION** (Pages 6-7).

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Epoxy Sink Outlets

Clean both the outlet and recessed hole in the sink with lacquer thinner.

Apply silicone or epoxy adhesive to the outlet in a 0.25" (6mm) bead around bottom edge.

Insert outlet directly into recessed hole in the sink.

Give outlet a 1/4 turn after contact is made - be sure the outlet is centered in the hole.

From under the sink, thread retaining nut all the way up and hand tighten until upper outlet flange is flush with sink basin.

Note: Do not use tools or over-tighten the plastic retaining nut.

Wipe off the excess adhesive in the sink. Using a rag dipped in lacquer thinner or distilled water, smooth out the edges of the sealant seam.

Clean excess sealant with a clean rag (damp or dry).

Polypropylene Sink Outlets

Scuff the contact surfaces under the outlet flange to increase adhesion.

Follow the procedure shown above using silicone or epoxy adhesive.

CARE & MAINTENANCE FOR EPOXY WORKSURFACES

Durcon epoxy worksurfaces are durable, non-porous, manufactured stone products that are relatively unaffected by most chemicals, heat, flame and moisture. These super-tough surfaces' physical properties are rarely compromised.

However, they do require periodic care and maintenance throughout the life of the lab or schoolroom to keep the surfaces looking like new. Whether you are a facility owner, manager, custodian or lab user, it is helpful to know how to maintain the good appearance of your lab's worksurfaces.

Regular Maintenance Procedures

Durcon recommends instituting a regimen of monthly or quarterly inspections for all surfaces and sinks. Daily or weekly cleanings will maintain the epoxy's original finish and help ensure a safe, uncontaminated working environment. The following list contains items to have on-hand for regular cleanings, and to handle most problems that may arise.

- | | |
|---------------------------------------|-----------------------------------|
| - Acetone or Paint Thinner | - Clean Rags or Sponges |
| - Crystal Simple Green® | - Chamois Cloth |
| - White Scotch Brite® Pads (damp/wet) | - Mild Soap or Household Cleaner |
| - Finish Oil (food-grade mineral oil) | - Two-part Smooth-On® epoxy grout |
| - Murphy's Oil | - Durcon Color Matched Caulk |

Note: Never use wax, or polish containing wax, on epoxy worksurfaces or sinks. Never use abrasive pads, powders or liquids (such as Soft Scrub), as this will dull the surface.

Worksurface Care

Promptly wipe up all spills. Acetone is best (where allowed) to thoroughly clean surfaces. Apply and wipe away with a paper towel or a clean rag. As an alternative, Crystal Simple Green® (or comparable household cleaning product) will also work.

An occasional application of finish oil or Murphy's Oil® can restore the luster to a surface, but keep in mind too much oil will cloud the surface. Apply a small amount of oil to a clean rag and thoroughly rub oil in using a circular motion. Wipe away excess oil with a clean rag, and a chamois can also be used to buff the surface to its desired sheen.

Epoxy Sink Care

Laboratory sink areas usually present the greatest cleaning and maintenance challenges. Sinks are a collection point for dirty and wet lab ware that leaves liquids, residue and chemicals on the surface for extended periods. Sink areas will require a more thorough cleaning regimen than dry bench tops as

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well as more frequent inspections. Sink inspections should include all sink surfaces and joints in sink the area including the outlet joint and the sink rim joint above and below the worksurface. Cracked or pitted joints should be filled immediately with two-part Smooth-On® epoxy grout to prevent leaking and damage to the supporting. If there is a more serious cleaning issue it is important to identify the problem before trying to remedy it.

Marring & Scratching

Most metals are softer than the worksurface and can leave a mar if pulled across the top. Marring is matter left on the surface that appears as a line and remains smooth to the touch. Marring can almost always be removed with acetone or with mild cleaning products and elbow grease. Always try the softest cloth and the weakest solution (soap and water) first.

If marring persists, progress to a white Light Duty Scotchbrite® Pad moistened with stronger solutions. Never use a dry Scotchbrite pad or a more abrasive pad and always apply the minimum amount of pressure required on the surface to remove the mar.

Harder metals, abrasives and heavy or sharp items can dig into the surface resulting in a scratch. Scratches usually appear as a lighter shade of the surface and are rough to the touch. While scratches in epoxy are permanent, they do not affect worksurface performance.

An aesthetic remedy for scratches is coloring in the void with a permanent marker. This option will never perfectly match the color and gloss of the surrounding surface.

Stained Surfaces

Staining is caused by chemicals left to dry on a surface. Chemical stains usually lighten or bleach the surface, but can also roughen and even crack the top. Like scratches, chemical stains are permanent and, if they have caused too much damage, you may need to replace of the top.

Note: If you see marks made by china markers, please reach out to us for removal suggestions.

Special Case Issues

Epoxy products (especially glued-in sinks) are subject to thermal shock and are not warranted against damage from liquid nitrogen or dry ice. Possible effects caused by the improper disposal of these materials include joint failure and/or sink fractures.



By following these simple guidelines your Durcon laboratory worksurfaces will look good for the life of the lab. Please take time to share this document with your lab workers and cleaning personnel and institute a maintenance program to help ensure the safety and beauty of your lab.

DURCON A WILSONART COMPANY
206 ALLISON DRIVE
TAYLOR, TEXAS 76574

WWW.DURCON.COM
512-595-8000