

Tips & Tricks of Desoldering with Braid

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It's a sad reality that no soldering operation produces 100% perfect assemblies, and even the highest quality components fail from time-to-time. Anyone who manufactures, maintains or repairs electronics needs an efficient and effective way to remove excess solder (e.g. bridging).

Solder suckers produce inconsistent results because the tool can't maintain a good suction over molten solder. Desoldering stations are more effective, but can be time consuming and the equipment requires constant maintenance to keep it working. Desoldering Braid (also called "wick"), on the other hand, is an excellent way to clean unwanted solder from a circuit board because it is inexpensive, effective, and eliminates the need for additional capital equipment. Soder-Wick[®] brand desoldering braid is the most popular all over the world. That's because Soder-Wick was the first desoldering braid developed over 40-years ago, and meets military, aerospace and industrial specifications.

Like any technical tools, there are best practices that can improve efficiency and consistency. Experience is the greatest teacher, but the tips below will improve your desoldering:

Tip 1: Match flux type to your cleaning process Soder-Wick desoldering braid is available in various flux types depending on your cleaning process and other requirements.

- **Rosin** – Rosin fluxed braid has the fastest wicking action, but does leave behind residues that need to be thoroughly cleaned. Isopropyl alcohol or Chemtronics Flux-Off brand cleaners will do an effective job.
- **No Clean** – No clean fluxed braid is ideal when cleaning isn't practical or possible. After desoldering, the only thing that remains is a clear, non-ionic residue.
- **Lead Free** – This type of braid combines a proprietary no clean flux and braid design that heats up quickly, so it avoids heat stress to components at higher lead-free temperatures.
- **Unfluxed** – In a production or repair environment where the flux is specified, or when an aqueous flux is needed, you can add your own flux to this type of braid. Unfluxed wick will not remove solder unless flux is added.

Tip 2: Choose static dissipative packaging for static sensitive applications.

Soder-Wick comes in various lengths, and lengths of 25 feet and longer are packaged in insulative plastic spools that can generate a charge. For work around static sensitive assemblies, use the static dissipative (or ESD-safe) blue bobbins that come standard for 5' and 10' lengths.



25' and longer spools
In insulative packaging



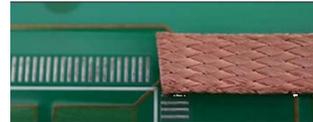
5 and 10' spools in static dissipative
packaging

Tip 3: Match braid width to solder joint or contact pad

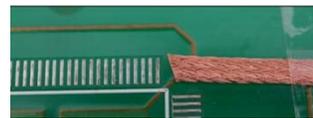
Choose a desoldering braid width that closely matches the size of the contact area. Smaller widths won't remove enough solder, and larger widths take longer to heat and may interfere with other components on the circuit board. Widths of braid are designated by the numbers 1 through 6 or color codes, which are standard in the industry. #1 braid is the smallest at .8 mm wide, but most will find #2 (1.5 mm), #3 (2 mm), and #4 (2.8 mm) to be the most commonly used. #5 is ideal for removing large blobs of solder, and #6 is best for desoldering BGA pads. Most find it helpful to keep three or four different widths at their work area.



*Braid too small:
Doesn't absorb
enough*



*Braid too big:
Too much copper to
heat*



*Braid correct size:
Matches pad width*

Tip 4: Match soldering iron tip to braid width

Choose a soldering tip with a width similar to that of the braid. You want to heat the whole braid quickly, but without interfering with surrounding components. Too small, and you aren't able to transfer enough heat to the braid. Too large, and you are applying too much heat and run the risk of causing thermal stress or desoldering unintended areas. A blade or knife tip is helpful when desoldering large areas, like a BGA pad.



*Tip too small:
Will not heat braid
effectively*



*Tip too big:
May affect other joints*



*Tip correct size:
Matches braid width*

Tip 5: Before starting, tin soldering tip with fresh solder

A well coated soldering tip conducts heat more efficiently to the desoldering braid and starts the wicking action more quickly.

Tip 6: To pick up solder in tight areas, add solder first

Small amounts of solder in tight crevices can be difficult to remove, but larger uniform solder joints wick right up. As counter-intuitive as it sounds, it helps to add more solder to joints like this before wicking up the unwanted solder.



*Add solder to tight
areas*

Tip 7: When drag desoldering, move tip over braid, not the pads

Dragging the copper braid over pads, for example when desoldering BGA pads, can scratch OSP coating and even the pads themselves if enough pressure is applied. It's best to apply the braid, and then drag the soldering tip over the braid.



*Drag iron over braid
instead of pads to
avoid scratching*

Tip 8: When solder is removed, lift up iron and braid at the same time

Always lift up the braid and soldering tip at the same time. Otherwise, you run the risk of soldering the braid to the board. This is the #1 rookie mistake, and a good way to remove contact pads along with the solder.



*Lift iron and braid at
the same time to avoid
lifting pads*

Tip 9: Clip used braid after each use

The temptation is to desolder an area and keep moving up the spool of braid. It is best to work on the end of the braid to isolate the heat. That leaves less copper to heat and reduces the risk of using a part of the braid where the flux has already been activated.



Keep braid clipped to better isolate the heat

Tip 10: Clean flux residues with a quality flux remover

Finally, after all the components and excess solder have been removed, clean the area thoroughly with a quality flux remover like Chemtronics® Flux-Off® cleaners. This is an optional step for No Clean or Lead Free braid, but still a good idea for densely populated or high voltage boards. Remember to angle the board to allow the cleaner and residues to run off.



Clean PCB after reworking, especially if using Soder-Wick Rosin

With these steps, you are using industry tested best practices to remove unwanted solder from a circuit board. Soder-Wick desoldering braid is an efficient and cost effective tool for any electronic rework or repair operation, whether you run a multi-national assembly operation or have a back-room repair shop.

Availability

Soder-Wick Desoldering Braid

Size	Rosin	No Clean	Lead Free	Unfluxed
#1	80-1-5	60-1-5	40-1-5	
#2	80-2-5	60-2-5	40-2-5	75-2-10
#3	80-3-5	60-3-5	40-3-5	75-3-10
#4	80-4-5	60-4-5	40-4-4	75-4-10
#5	80-5-5	60-5-5		
#6	80-6-6	60-6-5		

Flux-Off Rosin

ES835B 5 oz / 283 g BrushClean System
ES1035 10 oz / 283 g aerosol

Flux-Off Delta

DEL892B 6 oz / 141 g BrushClean System
DEL1693 12 oz / 340 g aerosol

Plato Extra-Strong Cutter

170S 1 cutter, 15 AWG rated

Plato Soldering Tips

Available for Hakko FX-888D, Weller WTCPT, Weller WES51, Weller WSL and more.

Technical and Application Assistance

Chemtronics provides a technical hotline to answer your technical and application related questions.

The toll free number is: 1-800-TECH-401.

Note:

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. CHEMTRONICS does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.



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