Wash bodies and lenses with Zep machine cleaner **[1]** or equivalent if very oily, then in Isopropyl alcohol. Dry parts with nitrogen. Wear gloves when washing parts. This will prevent the transfer of oils from your skin to clean surfaces and save your skin. **Do not clean circuit boards**.

Don't forget to clean up any spilled resin or components. Always wear gloves when handling uncured resins.

1) **Lens and filter assembly:** Mix the Eccobond 27 A/B **[2]** as directed. De-gas the pot until the resin slowly bubbles when under vacuum. If there are bubbles in the pot, de-gas again. Let stand for 5-10 minutes. This will allow any small bubbles to rise out. Slowly fill a 1ml syringe with resin. Drop the filter into the body (all have been silver side down, but only for the sake of consistency.) Add 0.12 ml of resin in a single drop to the center of the filter. Install the lens, press lightly and inspect for air bubbles in the resin. If there is a bubble, tilt the axis of the body horizontal and press the lens until the bubble is excluded. Check the lens/body interface for bubbles. Press on and rotate the lens to force out the air. Once the air is excluded, wipe the lens to remove excess resin and set aside lens up. The pot life of Eccobond 27 is 1 to 2 hrs. Wait 24 hrs before proceeding.
2) **LED and circuit board (Clear):** Teflon surfaces should be scrubbed with acetone and dried prior to assembly. Mix the Eccobond 27 as directed. De-gas as above. Slowly fill a 10 ml syringe with Eccobond 27. Set the body on the lens end and put the syringe tip through the LED hole into the pocket above the filter. Slowly add 8 ml of resin. Repeat for the other bodies. Tape or rubber-band up to 7 bodies together and degas. Roll the pot and observe the resin in the pockets. Once the de-gas is complete, remove the bodies from the pot and set aside for 5-10 minutes to allow any small bubbles to exit. Guide the circuit board/LED assembly into the body, centering it as best you can until the LED drops into the hole. The LED is home if there is 1.65" from the circuit board to the end of the body. **DO NOT** back up once the LED is in the resin, as you will likely introduce air to the pocket if you do. Support the wire or circuit board as required to roughly center the board in the body during the cure. Wait 24 hrs before proceeding.
3) **Black potting (1st phase): By all means, wear gloves. This stuff is nasty.** Work with a maximum of 4 modules at a time. Quickly mix ~150g of Stycast 2651 **[2]** as directed. Degas very quickly and violently. Carefully add resin to all four modules to within ~1/8" of the top of the circuit board. Avoid getting resin on the end of the wire

jacket, as it will bubble during the degas. Degas all four modules before proceeding. The de-gas should last about a minute at full vacuum, just long enough to exclude any air bubbles introduced during the fill. Use sealant on the wire end outside of the pot to help prevent bubbles. Carefully add potting compound to within 3/4" to 1" of the top of the modules. Do not de-gas. Center the wires in the modules and wait 24 hrs.

4) **Black potting (Final):** Quickly mix 80-100g of Stycast (per 4 modules) as directed. De-gas very quickly and violently. Fill modules to the top and degas. Degas should be gentle and is only to remove large bubbles. Don't make a mess. Wait 24 hrs before handling.

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[1] Zep Manufacturing Co., Atlanta GA, (404) 355-3120, www.zepmfg.com

[2] Emerson & Cuming, Billrica, MA, (978) 436-9700