



GEN II Leak-Stop Gel

Installation Instructions

How to install the GEN II Gel in an existing RE-5 or RE-5C Electrode:

1. Remove the copper rod assembly by unscrewing the white nylon cap from the orange Lexan tube and empty out the solution currently inside the Lexan tube into a container that can be suitably disposed of. *Please check with your local authorities regarding proper disposal of the solution (either copper sulfate solution or copper sulfate anti-freeze solution, depending on what type of solution was previously-used in the electrode)*
2. Unscrew the plug assembly from the bottom of the Lexan tube and, again, be careful to add any residual copper sulfate solution to your container for proper disposal. Depending on how the electrode was previously-used, there may also be some residual copper sulfate (solid) crystals in and around the plug assembly and also inside the Lexan tube. These crystals should also be placed inside your container for proper disposal. *Note:* Copper sulfate crystals will not be required in conjunction with the GEN II Gel.
3. Plug Preparation Step

Option 1 – Electrode Calibration Guaranteed:

Soak a new plug assembly in tap water overnight. After soaking, dry the center cavity and the outer circular cavity of the white plastic part of the plug assembly and proceed to Step 4.

Note: With Option 1, the electrode potential will be within $\pm 10\text{mV}$ of 316mV , versus the SHE potential.

Option 2 – Electrode Calibration Not Guaranteed (since condition of existing plug is not known):

Thoroughly clean the inside of the existing plug assembly using D.I. or distilled water (and something like a tooth-pick), being careful to remove any residual solution or crystals particularly from the white plastic middle cavity of the plug assembly, which exposes the (porous) ceramic material. A properly-cleaned plug assembly is illustrated in the photograph shown below.



4. Burnish the copper rod of the rod assembly to a shiny finish using a 3M Scotch-Brite (green) pad.
Note: Do not use sandpaper.
5. Fill the center cavity and the outer circular cavity of the white plastic part of either a new or an existing plug assembly with the GEN II Gel, making sure that there are no air bubbles present, particularly in the center cavity section, in order that the cavity is completely filled with the Gel and that the Gel makes good contact with the ceramic part of the plug assembly, as illustrated in the photograph shown below.



6. Screw the rod assembly (with burnished copper rod) back onto the top of the Lexan tube (making sure that the rubber o-ring is properly-seated). *Note:* Screw firmly but do not over-torque.
7. Turn the Lexan tube upside down and fill the tube to a level just above the bottom of the threads with the GEN II Gel, as illustrated in the photograph shown below.



8. Screw the plug assembly onto the bottom of the Lexan tube (making sure that the rubber o-ring is properly-seated). *Note:* Screw firmly but do not over-torque.
9. Turn the electrode right-side up (ceramic plug at the bottom), place the orange plastic cover over the plug, and, let the electrode sit overnight to stabilize before use or testing.

Note: When using gel or antifreeze solution with an RE series portable electrode, there will be a -12mV shift in the potential. This should be noted when interpreting the resulting readings.

