

Clifton Hypalon Adhesive Gluing Instructions

Provided by NRS

Materials Needed

- Pennel Orca® and neoprene repair
 - D-ring patches
 - Footcups & Handles
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Recommended Safety Precautions

- Work in a well ventilated area (garage or shady area works well).
 - Organic fume respirator
 - Chemical resistant gloves (i.e. Nitrile gloves)
 - Eye protection
 - Extra lint-free rags for spills/cleanup
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Environmental conditions

- Ideal ambient temperature for gluing: 75°F and below 50% humidity.
 - Maximum humidity: Do not try to mix and apply glue if the humidity exceeds 70%.
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Fabric preparation

1. Cut the patch to extend 2" beyond all edges of the tear. Be sure to round the corners of the patch. Square cornered patches are more likely to catch and peel than rounded patches.
 2. Trace the area of the patch on the damaged surface with a pencil.
 3. Using fine sandpaper or a rasp, lightly buff the areas to be glued, including the back side of the patch. The goal is merely to remove the surface glaze of the material, without removing excess coating. DO NOT buff down to the threads of the material.
 4. Clean the buffed surfaces with Toluene using a lint-free towel. Use of Toluene is important for achieving a good glue bond. Let the Toluene evaporate before applying adhesive.
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Accelerator - Optional

Clifton Hypalon Adhesive works well as a one-part glue. However, the addition of Accelerator to the adhesive significantly increases bond strength and chemical and heat resistance. It vulcanizes the rubber and speeds curing of the glue bond. This combination of Clifton Adhesive and Accelerator is what we use in our boat factory for producing NRS Pennel Orca boats.

We strongly recommend the mixture for air holding repairs and for attaching anything that will be subjected to high load stress, such as d-rings, carry handles and footcups. We supply a precise measuring device and complete use instructions with the Accelerator. Follow mixing instructions carefully; using too much Accelerator will actually weaken the glue bond.

Application of Adhesive

1. Both surfaces to be joined must be coated with adhesive.
2. Apply one thin, even coat of adhesive to each surface. If needed, you can thin the adhesive with Toluene to make it spread more evenly. Use no more than one part Toluene to 10 parts adhesive.
3. Wait until this first coat of adhesive is just to the tacky stage - approximately 10 to 30 minutes, depending on conditions. Use the "knuckle" test - touch your gloved finger or bare knuckle to the glue. You should feel adhesion without your finger or knuckle sticking or adhesive coming off the surface.
4. Apply a second thin, even coat to each surface. Wait until the second coat has an even, tacky finish (surfaces should not be visibly wet). Use the knuckle test again to gauge the tacky stage.
5. Repeat Step 4 with a third thin coat to both surfaces. Allow to dry to the knuckle tacky stage. If adhesive dries beyond this stage, you can reactivate the adhesive by wiping the surfaces to be bonded with a lint-free cloth dampened with Toluene.
6. Carefully align the two surfaces. This is a contact adhesive and when the surfaces touch you will not be able to move the patch. Apply vigorous pressure to the entire glued surface using a roller, rolling from the center out. This forces air bubbles out and meshes the two materials together. Use a lint-free cloth dampened with Toluene to wipe up excess glue.
7. Complete curing time varies with different temperatures, humidity and whether Accelerator was used. The optimal repair conditions of above 60°F and below 50% humidity allows for a curing time of 8 - 12 hours. If at all possible, avoid repairs when the humidity is above 70%.
8. Be careful when rolling up a repaired boat for storage. Make sure drying is complete.

Note: We recommend regularly applying 303 Protectant to your boat. It protects the material from UV damage.