

How To Use Patcher® To Bond Metal Plates

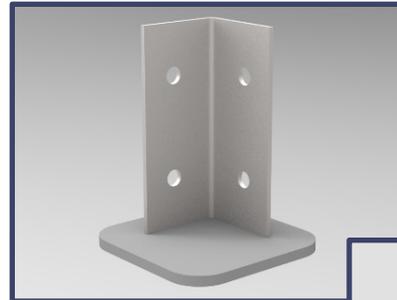


Kevlar® Epoxy Metal Repair Compound

Problem Area:

This “How-To” covers the use of Patcher® epoxy to bond metal plates and metal fixtures to metal substrates. This is ideal where welding permits cannot be obtained and hot work cannot be done.

These repairs are commonly found on platform decks, active pipework or factory and plant settings where open flame is prohibited or on structures where welding would damage an inner lining such as on tanks. Also for creating pipe support linings and bonding wear plates.



Make sure your surface is ready!

Step One: Clean The Surface



Patcher® is a surface tolerant epoxy and will bond to wet and oily surfaces and underwater. This does not mean no surface preparation is necessary.

If the conditions permit, clean the surface with a cleaner/degreaser. Ideally, the surface would be dry, free of leaks, dirt, rust and other coatings..

If the surface is extremely oily, a heat gun may be used to sweat out the oil. Patcher® will still bond to the surface, but attempt to remove as much oil as possible for maximum adhesion.

If applying underwater, try to wipe clear all deposits on the surface.

Step Two: Create An Anchor Profile

An anchor profile will create a surface for the epoxy to “cling” to for maximum adhesion.

For best results, abrasive blast the surface with an angular grit like silicon carbide or aluminum oxide. When this is not possible, use a coarse grinding wheel. An anchor profile of 0.003 to 0.005 inches (75-125 microns) is desirable. If neither of these methods can be performed, then coarse sandpaper or a metal file can be used.

If applying underwater, a metal file or brush is recommended.



When bonding equipment mounts, be sure to align exactly using measuring guides to prevent adhesion failure.

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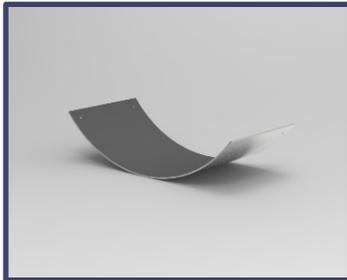
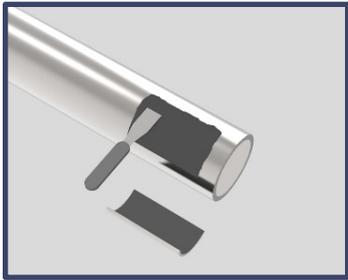


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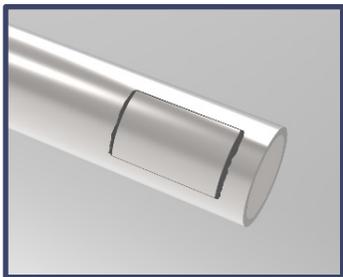
Bonding Metal With Patcher®!

For Pipes, Cradles & Supports

- ❑ Pipe repair, especially on pressurized pipes, should be done in conjunction with the plant engineer. Some repairs are beyond the scope of a plate repair.
- ❑ All damage should be repaired using the relevant "How-To" and the area blasted, grinded or filed to remove all surface contamination. The area should be prepared according to the surface preparation instructions
- ❑ Apply the epoxy to both the metal substrate and the plate. Add extra material to create a central peak. The minimum thickness should add to 1/16 '.



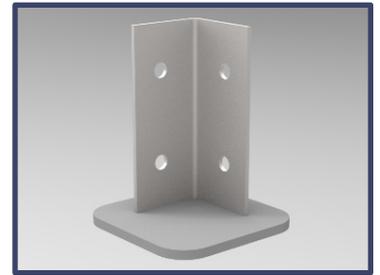
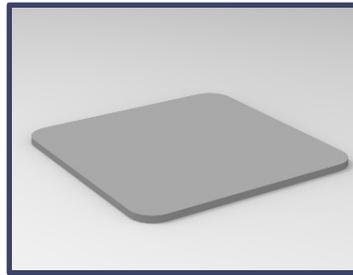
- ❑ Slowly affix the plate to the pipe and any excess epoxy should be removed immediately.
- ❑ To ensure a superior bond, use bands or clamps to secure the plate until the epoxy cures.



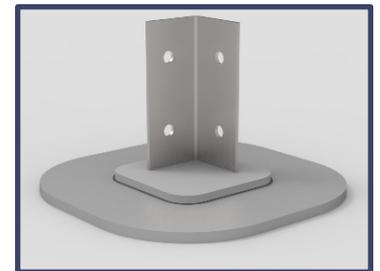
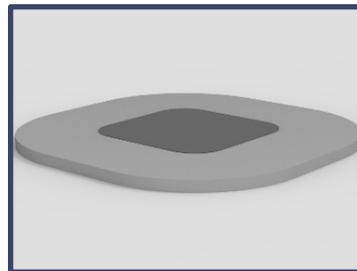
To ensure maximum adhesion, first pre-coat the area by rubbing the material thoroughly into the repair area to fill all the crevices. This is called "wetting"

- ❑ To reinforce the repair (optional or for pressurized pipes), impregnate (soak) reinforcing mesh with the epoxy on a flat surface. Wrap the pipe with this mesh. Before the epoxy hardens, coat the entire mesh with epoxy all around.

For Flat Surfaces & Fixture Supports



- ❑ Prepare the surfaces of both the substrate and the plate according to Surface Preparation Instructions,
- ❑ If bonding fixture brackets, ensure that guides are in place to ensure proper placement for equipment installation. For antennas a wooden platform should be used for precise alignment and simultaneous installation of the fixture plates.
- ❑ Apply the epoxy to both the metal substrate and the plate. Add extra material to create a central peak. The minimum thickness should add to 1/16
- ❑ Slowly affix the plate to the metal surface and any excess epoxy should be removed immediately.



See Product Data Sheet for ideal temperatures for application and cure times. To force cure or in cold climates, the area should be heated.

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