WHITE PAPER

PVC-Based Expansion/ Deflection Coupling

Now Compatible with Fiberglass Raceways!

Thomas&Betts
A Member of the ABB Group

Our PVC-based Non-Metallic Expansion/Deflection Coupling (NM XD) is now compatible with fiberglass raceways systems, expanding the potential uses and opportunities. We are no longer limited to PVC raceway systems only.

This innovative UL® approved and NEC code compliant product is safe to use and installs quickly. It is an ideal solution where raceways cross structural joints intended not only for expansion and contraction, but also for deflection. Ideal for a variety of applications such as bridges, piers, parking garages, overhead walkways, hospitals and many other buildings, it works very well with both Schedule 40 and Schedule 80 rigid PVC conduit, indoors and outdoors, in direct burial applications or embedded in concrete.

Recently, our engineering team has created a solution to ensure that our Expansion/Deflection Coupling can also be used successfully with fiberglass raceways. After extensive tests, we can recommend a type of bonding compound called Methacrylate Adhesive that is suitable for fiberglass applications. One specific brand recommendation is, but not limited to, PLEXUS MA 300 (1:1). Please refer to the “Plexus Guide to Bonding” document.

The use of the Expansion/Deflection Coupling with fiberglass raceways has passed all the pull-out and water tightness tests required for a successful bond. We recommend that normal bonding procedures for fiberglass systems are followed to ensure a proper bond. Below are the assembly instructions and the sanding instructions:

Assembly instructions

1. RTRC conduit ends shall be prepared as described by manufacturer of RTRC conduits before Plexus Methyl-Acrylate is applied. This is done by sanding the RTRC conduit until factory “sheen” is removed.
2. Use a 2-part adhesive gun with tubes and mixing head applicator(s) to apply the adhesive in a zig-zag pattern on RTRC conduit where factory sheen was sanded off and then spread the adhesive.
3. Push the RTRC conduit with spread adhesive into NM Expansion/Deflection socket with a twist action and rotate at least ¼ turn until bottoms out to set the adhesive and creating a stable bonded joint. Visually inspect for a good seal.
4. Surface attraction results from the thin layer of adhesive between RTRC conduit and the socket of the NM XD fitting.
5. Allow adhesive to set up before pulling cables.

Instructions for sanding the conduit:

– Factory ends come pre-sanded. Only field-cut conduit sections require sanding.
– Sand areas to be bonded with 60 grit emery cloth until factory “sheen” is removed.