

DPM REPAIR SUPPORT PRODUCTS

- DPM Materials - Fuel-Thane
- DBF II - Fill
- DRP - Paste
- DBB V - Sealer
- Zip Tight - Bonder
- DBC - Cleaner
- 6-Pack Multi-Pack



Diversified Repair Materials (Fuel-Thane)

Over the years, DPM has expended a great deal of research and has gained a great deal of experience in the repair of failed penetration fittings. DPM's repair products were first offered in 1996.

- ✓ DPM continually invests in Research and Development, making us the leader in repair products.
 - The boots and sleeves that come in contact with the sump interior must be fuel and water resistant.
 - They must be able to be solvent welded together in the field.
 - They must also be sufficiently transparent to allow the installer to see the filling process work.
- ✓ DPM has selected **Fuel-Thane, a proprietary form of pellethane**, as its base material for its repair boots & fittings.
 - This material has passed tests by UL for chemical resistance to the fluids tested by UL for penetration fittings.
 - The testing resulted in a listing in 2005.
 - That listing has been removed as DPM does not subscribe to UL's follow up service program.
 - The original UL report is available on request.
- ✓ **All of these features and the ability to "Split" the boot & "Bond" it back together, makes Fuel-Thane the material of choice for our "Split Repair" products.**

Diversified Bulkhead Fill (DBF II)

***** In over 12 years of research, Polysulfide is the BEST MATERIAL found for use in repair boots*****

DBF II, Diversified Bulkhead Fill, is a mix of 2 components that when mixed together form a liquid form of polysulfide that DPM recommends be used to fill the inside of the repair boots & fittings.

- ✓ This mixture completely "fills" the insides of the boots and then "cures" to a hardened yet flexible state.
- ✓ DBF II is the BEST Material we have found, so far, to use as the "filler" for our repair boots
- ✓ DBF II was tested by UL and was listed with the repair boots.

DPM uses a similar polysulfide material in paste form, called DRP, that was not tested by UL.



DBF II
Produces a
Thick Black Liquid

Diversified Repair Paste (DRP)

DRP, Diversified Repair Paste, is also a mix of 2 components that when mixed together form a thick paste form of polysulfide that DPM recommends be used as a sealer for breaches in sump walls and to repair damaged boots during the repair process.

- ✓ DRP provides some adhesion to Poly sumps.
 - ✓ DRP also provides excellent adhesion to fiberglass sumps and metal components.
- DBF II and DRP are not Haz Mat items and may be shipped air or ground without Haz Mat surcharges. DBF II and DRP are packaged in 20 oz twin tube cartridge sets.
- It is recommended to purge 2 ounces while starting the mixing process of these products, we use 18 ounces in our recommended volume calculations.
 - Use DAG manual applicator gun for applying these materials. DAG-P pneumatic applicator gun is available for projects requiring fast filling or where there are numerous repair boots to be filled.

Notes about Polysulfide:

- ✓ The polysulfide's in general have some adhesion to the Fuel-Thane material the is used in DPM's boots.
- ✓ The sump walls and repair boots must be dry and clean during the repair process for the polysulfide to provide the proper adhesion to all the components.
- ✓ Polysulfide's are very fuel resistant.
- ✓ Polysulfide is used as a liner in fuel cells in aircraft.
- ✓ Polysulfide may be installed in any temperature including "sub-freezing"
- ✓ Polysulfide starts curing at temperatures above 50-55 degrees Fahrenheit.



DRP
Produces a Battleship
Grey Paste



DAG
DAG Assembled with
tubes in place with the
mixing tube attached

Diversified Bulkhead Bonder (DBB V)

DPM previously used DRP, the polysulfide paste, as the material of choice for adhering their repair boots to poly sumps.

This is now changed

In ongoing tests, DPM has learned that the Methyl Methacrylate (DBB V) provides better adhesion between the Fuel-Thane boots and fiberglass sumps, and is good on poly sump surfaces when **stressed in shear**.

- Items bonded with Methyl Methacrylate while providing excellent adhesion when **sheer is applied**, will release the bond when a poly sump wall is **stressed in tension**.
 - Most installations are **bonded in compression**, and tension is rare.
- ✓ DPM has now recommends the use of DBB V, Methyl Methacrylate, for bonding to all sump walls.
- The customer however, may elect to use polysulfide paste for these and other bonding or sealing applications.

Notes about Methyl Methacrylate

- ✓ DBB V is provided in a 50 ml twin tube caulk cartridge.
- ✓ Use the DAG III applicator gun for applying DBB V.
- ✓ DBB V is a Haz Mat item only when shipped via air.

DBB V



DAG III



Diversified Urethane Solvent Welding Liquid (Zip Tight)

DBB III is a solvent welding material used to bond two pieces of Fuel-Thane together.

- ✓ Most notably Zip Tight is used to bond a split product together or an insert or plug into a sleeve.
- ✓ Zip tight is manufactured by dissolving the virgin Fuel-Thane pellet in a strong solvent.
- ✓ When the resulting pregnant solution is applied to two mating fuel-thane surfaces, the two surfaces bond together to the same strength as the original piece before splitting or cutting.
- ✓ Zip Tight is offered in two sizes,
 - 4 oz kit -which is a kit with gloves, an applicator bottle, and a canister with 4 oz of material.
 - 16 oz kit -which is a kit with an applicator bottle, and a 16 oz bottle of material.
- ✓ Care should be taken not to order this material for stock as it tends to solidify within 6 months of filling.
 - The VOC's drive off rapidly and seem to escape the confined space without explanation.
 - Should the containers be opened to atmosphere on multiple occasions, the remaining fluids may cure into a solid in a relative short time.
- ✓ Zip Tight is rated "Haz Mat" for both ground and air shipments.

4 oz with
Applicator Bottle



16 oz with
Applicator Bottle



Diversified Bulkhead Cleaner (DBC)

DBC is an aerosol cleaner used to remove any foreign matter from mating surfaces prior to bonding.

DBC



- ✓ DBC is a 16 oz aerosol form of trichloroethylene and is a very aggressive cleaner.
- ✓ All surfaces should be cleaned with this cleaner prior to bonding.
- ✓ When the fuel-thane parts are injection molded, a silicone release is used to assist in the removing of the parts from the molding machines.
 - This silicone residue is not visible but must be removed prior to bonding.
- ✓ Acetone, used by many installers for cleaning purposes, should not be used in this application.

Notes about DBC

- ✓ DBC is an ORM-D product that is classified as Haz Mat on air shipments only.

Diversified Installation Kits

DPM offers all of these products individually and in an installation kit.

- ✓ The installation kit is less expensive to purchase than the individual products separately.
- ✓ Additional quantities of these components are offered to round out stock and are available for “one off” installations.
- ✓ Most products are available in case quantities for larger jobs



DRP

DBF II

Zip Tite
4 oz

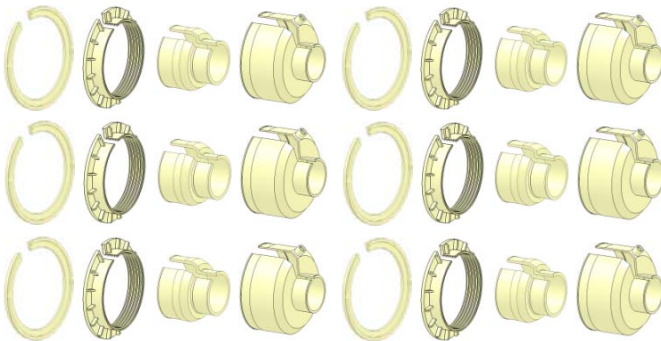
DBB V

DBC

Diversified 6 Pack Repair Kits

DPM also offers the repair kits in 6 packs that have all the repair components and installation components necessary to repair 6 penetration fittings.

- ✓ DPM has waived the Haz Mat fees for customers that purchase these kits.
- ✓ These kits are the most cost effective way of purchasing DPM repair products.
- ✓ All items are net priced and are only available to trained installers or distributors of the DPM repair products.



“6-Pack” Traditional 3950 Direct Burial
“Split” Repair Boots



Sufficient product is supplied to complete the repair of the six kits provided