

WELD-ON®

THE WORLD'S MOST TRUSTED BOND

THE DIFFERENCE BETWEEN PVC SOLVENT CEMENT AND PVC GLUE

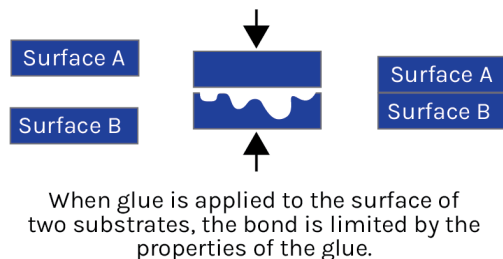


Weld-On has been the industry leader in solvent cement manufacturing for over seven decades. When you mention PVC glue or PVC adhesive to a long-time Weld-On employee, don't be surprised if they correct you and say Weld-On produces high-quality PVC solvent cement, not PVC glue. Even though the terms are used interchangeably in the industry, there is a big difference between solvent cement and adhesives.

The Differences Between PVC Solvent Cement and Glue

There are many types of glue. The most popular is Polyvinyl Acetate (PVA) glue, which is popular with woodworking, crafts and construction because it is water-based, dries clear and is safe to use. Its main ingredient is polyvinyl acetate resin, which means it can be easily diluted in water and is easy to clean up or removed if it's still wet. Other popular glues, like super glue, epoxy and hot glue, are extremely effective in many situations; however, they are not designed for PVC piping applications.

Glue Bonding Process



Why PVC Solvent Cement is not PVC Glue or PVC Adhesive

The basic function of glue is to attach two surfaces together, like wood, metal, plastics, and ceramics. When two surfaces are glued, they are connected together by the superficial properties of the glue. The glue's strength comes from the ingredients within it, but it has a lot of limitations depending on the type of glue used and the surfaces it connects.

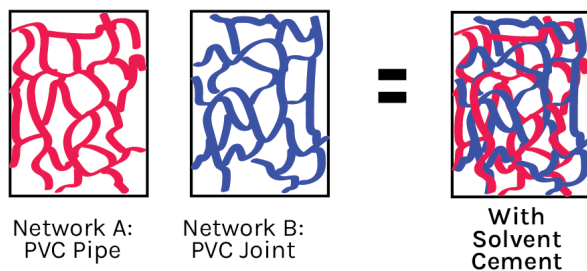
The opposite is the case when bonding PVC joints with solvent cement. There are many types of uses for CPVC, PVC or PVC-U pipe, including pool and spa installation, transporting water for irrigation purposes, or moving corrosive chemicals safely. It is critical to ensure strength and dependability of the PVC

welded pipe to prevent unnecessary damage, protect people and equipment from hazardous materials or ensure the safe delivery of water to a destination. PVC joint failure is never an option.

How PVC Solvent Cement Works

When solvent cement is applied to the surface of the PVC pipe or PVC fitting, it softens or loosens the surface at a molecular level. The solvent unravels the interpenetrating polymer network (IPN) on the surface, which, on a molecular level, looks similar to cooked spaghetti. Before the solvent cement is applied, the spaghetti molecules are tightly locked together, similar to cooked spaghetti that has been in a freezer. When the solvent cement is applied to PVC pipes and PVC fittings, the molecules become loosened. When pressed together and allowed to cure, the molecules get tangled with each other, which is called IPN entanglement, creating a bond much stronger than glue. Many tests have been conducted to test the failure point of PVC solvent cement joints using air, water pressure and lap shear tests, and the results are the same. The entanglement bond produced by solvent cement results in a bond far superior to glue but even stronger than the pipe.

Interpenetrating Polymer Network (IPN)



When solvent cement is applied it loosens the interpenetrating polymer network (IPN) molecules so they can be entangled to create a bond stronger than the pipe.

The next time you hear an employee say Weld-On produces premium PVC solvent cement, not PVC glue or PVC adhesives, you'll understand why. For more information about Weld-On products, go to www.WeldOn.com.

Weld-On training and support staff are available to answer any questions about products or solvent welding techniques. To talk to a real person, call our technical hotline at 1-877-477-8327, email us at training@weldon.com or connect at www.weldon.com/technical-training, to schedule free training.



Visit www.weldon.com for more information.