

# PSX™ 20 Adhesive Kit

## Epoxy siloxane adhesive for bonding fiberglass pipe and fittings with tapered joints

### Description

PSX 20 adhesive is a patented two-part epoxy siloxane adhesive designed for permanently joining fiberglass pipe and fittings with taper/taper joints. PSX 20 is a non-flowing thixotropic paste offered in easy-to-use kits. The PSX 20 epoxy adhesive kit contains an adhesive resin, hardener, mixing spatula, brush and assembly instructions. The adhesive resin is a dark red paste with sand. The adhesive hardener is a white paste. The mixed adhesive color is red. PSX 20 can be used to connect epoxy, vinyl ester or phenolic systems.

### Listings and Approvals

PSX 20 adhesive is Listed by Underwriters Laboratories (UL) under File MH9162 for use in Nonmetallic Underground Piping for Flammable Liquids. PSX 20 adhesive is particularly suited for piping systems conveying petroleum products including diesel fuels, kerosene, etc., alcohols and alcohol-gasoline mixtures, or oxygenated fuels. It is also approved by Underwriters Laboratories for use with MTBE fluids.

### Preparation of Bonding Surface

Using the sandpaper supplied in the adhesive kit, **clean** both surfaces **thoroughly** to remove all dirt, grease and foreign materials. Make sure the bonding surfaces are free of moisture.

**Do not touch** the bonding surfaces with bare hands, dirty or greasy gloves or rags after cleaning them.

### Mixing the Adhesive

In cold weather it is necessary to warm the resin to between 70°F (21°C) and 80°F (27°C) to permit good mixing and easier application.

Open both resin and hardener containers. Using the stick supplied, put all of the hardener into the resin container. **Never split a kit.**

### Pot Life and Cure Time

At 77°F (25°C) the pot life of PSX 20 adhesive is 20 to 30 minutes. The pot life decreases with rising temperatures:

Temperature		Adhesive Pot Life	Minimum Joint Cure Time
°F	°C	minutes	hours
60	16	40	6
70	21	30	5
80	27	20	4
90	32	8	3
100	43	5	1

In extremely cold or windy conditions, use insulation to prevent rapid dissipation of heat from the cure reaction. Cap the ends of the piping to prevent the passage of cold air. In severe cold conditions, warm air may be blown through the interior of the pipe. A heat cure is recommended for installations with service temperatures above 180°F (82°C) or operating pressures over 300 psi. For ambient temperature conditions below 60°F (16°C), an external heat cure must be used. A minimum heat cure time of at least 30 minutes is recommended for 2 through 6-inch pipe. Even after the adhesive has turned solid at ambient temperatures, heat curing will promote chemical cross-linking of the adhesive, thus increasing its strength, temperature resistance and corrosion resistance. A single Chem Cure Pak may be applied or an NOV Fiber Glass Systems approved electric heat blanket may be used. The heat cure may be applied at any time after the bond is made and before the pipe has been tested or put into service.

## Adhesive Kit Sizes and Bonds Per Kit

Adhesive kits are available in 3, 5 and 8-oz. sizes. The table below indicates the number of bonds per kit for each pipe size. Values in the table are based on the quantity of adhesive required by an experienced crew working at a temperature of 75°F (24°C) with a 30 minute adhesive pot life.

Kit Size	Bonds per Kit per Pipe Size								
	2	3	4	6	8	10	12	14	16
3	7	5	3½	1½	1	½	—	—	—
5	12	8	6	2½	1½	1	1	½	½
8	—	13	9	4	2½	1½	1	1	½

## Shear Strength Comparison

Polysiloxane-epoxy adhesive demonstrates a significant improvement in bonding capabilities over conventional epoxy adhesives. When cured at room temperature, PSX 20 achieves 15 to 20% greater shear strength than conventional epoxy adhesives. With elevated temperature cures, lap shear strength increases to 20 to 35% over standard epoxy adhesives. PSX 20 also offers significant improvements over conventional epoxy adhesives when bonding phenolic based laminates. When applied according to manufacturer's instructions, PSX 20 yields a secure bond for Dualoy™, Bondstrand™ and Bondstrand PSX products.

## Storage

Do not store kits in areas above 100°F (38°C) or below 32°F (0°C), or in the direct sunlight in warm weather. In cold weather warm the resin to at least 70°F (21°C) but not above 100°F (38°C) to permit good mixing and easier application. Do not use adhesive past its expiration date.

## Toxicity

**Hardener:** The hardener is irritating to the skin, eyes and respiratory tract. It is toxic orally and may cause sensitization.

**Resin:** The resin is irritating to skin and eyes and may cause sensitization.

## Handling Precautions

**Hardener:** Do not get in eyes, on skin or clothing. Avoid breathing vapor; use caution when opening can. Wear rubber gloves and apron and NIOSH-approved respirator. Wash thoroughly after handling.

**Resin:** Avoid contact with eyes, skin or clothing. Wear rubber gloves and eye protection. Wash thoroughly after handling.

## First Aid

### In case of contact

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**Skin:** Wash skin with soap and water.

**Clothing:** Remove contaminated clothing and wash before reuse.

**Inhalation:** Remove to fresh air. Give oxygen or artificial respiration if necessary.

**Ingestion:** If catalyst is swallowed and person is conscious, give plenty of water or milk to drink. Do not induce vomiting. Call a physician. If resin is swallowed, give 100 grams (about ¼ lb) activated charcoal slurry in water. Do not induce vomiting. Call a physician.

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