

PSX™ 34 Adhesive Kit

Epoxy siloxane adhesive for bonding fiberglass pipe and fittings

Description

The PSX 34 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 34 is a two- part epoxy siloxane adhesive formulated for permanently bonding Quick-Lock® joints on fiberglass-reinforced pipe and fittings. It can also be used to bond tapered joints in hot conditions or two-piece clamshell containment fittings. PSX 34 can be used to connect all epoxy and phenolic piping systems, and most vinyl ester systems.

Listings and Approvals

PSX 34 adhesive is listed by Underwriters Laboratories (UL) under File MH 9162 for use in Nonmetallic Underground Piping for Flammable Liquids and with Underwriters' Laboratories of Canada under File CMH 715. PSX 34 adhesive is Listed by the National Sanitation Foundation under NSF Standard 61 - Drinking Water System Components - Health Effects for use in Potable Water Service and Commercial Hot Water Applications.

Instructions

Prior to handling, read all Toxicity, Precaution and First Aid information below. Before mixing the adhesive, insure that the bonding surfaces are correctly prepared and are clean and dry. Open the resin and hardener containers. Using the mixing spatula, scrape all of the hardener into the resin container. Mix the resin and the hardener with the spatula for at least 60 seconds. Scrape the sides, bottom and lid of the resin container occasionally to get all of the hardener into the mix. **Never attempt to split a kit.** The resin and the hardener have been packaged at the correct ratio for optimum adhesive performance.

Apply a uniform coat of the mixed adhesive to both bonding surfaces and draw the parts firmly together. Detailed joint assembly instructions may be found in Quick-Lock Installation Instructions. For taper/taper bonds, the coating of the bonding surfaces must be complete and should be very thin.

Pot Life and Cure Time

For installations with service temperatures below 180°F (82°C) and pressures below 150 psi (1.03 MPa), PSX 34 bonds can be put into service with ambient temperature cures as indicated in the table (See page 2 of this section). However, it is highly recommended that an external heat source be used to force cure the adhesive. The adhesive and bonding surfaces should be warmed to 70°F (21°C) prior to mixing and applying the adhesive. Adhesive may be force cured using an NOV Fiber Glass Systems approved heating blanket. The table also indicates the pot life (working time) of the adhesive at various temperatures. The pot life is the time from the initial mixing of the resin and hardener until the adhesive in the container begins to thicken and is no longer usable.

For systems with anticipated service temperatures above 180°F (82°C) or operating pressures over 150 psi (1.03 MPa), or when installing any system at ambient temperatures below 60°F (16°C), the adhesive joint must be cured with an external heat source. A heat cure using an approved electric heating blanket is recommended. The heat cure may be applied at any time after the bond is made and before the line is tested or put into service. The heat may be applied immediately after making the bond while the adhesive is still liquid or after it has gelled to a solid. When electricity is not available, bonds can be cured with Chem-Cure Paks.

Minimum cure times of 30 minutes for 1- through 6-inch pipe and 45 minutes for 8- through 16-inch lines are recommended. Even after the adhesive has solidified at ambient temperatures, heat curing will enhance the chemical cross-linking of the adhesive, increasing the strength, temperature resistance and corrosion resistance of the adhesive.

When used in fire protection service all joints must be force-cured with an external heat source regardless of ambient temperature.

| Ambient Temperature ⁽¹⁾ | | Adhesive Pot Life | Minimum Joint Cure Time ⁽²⁾ |
|------------------------------------|----|-------------------|--|
| °F | °C | Minutes | Hours |
| 60 | 16 | 40 | 6 |
| 70 | 21 | 30 | 5 |
| 80 | 27 | 20 | 4 |
| 90 | 32 | 8 | 3 |
| 110 | 43 | 5 | 1 |

- (1) At temperatures below 60°F (16°C), an external heat source must be used to force cure the adhesive. The adhesive and the bonding surfaces should be warmed to 70°F (21°C) before mixing and applying the adhesive. Adhesive may be force cured using an approved electric heating blanket. When using adhesive at ambient temperatures above 100°F (38°C), make provisions to keep adhesive cool to extend pot life.
- (2) Times indicate when cure is sufficient to permit moving the bonded joint. The minimum joint cure time must elapse prior to hydrotesting.

Adhesive Kit Sizes and Bonds Per Kit

PSX 34 adhesive kits are available in 3 oz., 5 oz. and 8 oz. sizes. The values in this table are based on the quantity of adhesive required by an experienced crew working at a temperature of 80°F (27°C).

| Bonds per Kit | Kit Size (fl oz) | Nominal Pipe Size in/mm | | | | | | | | | | | |
|---------------------------|---------------------|----------------------------|-------|------|------|-------|-------|-------|-------|--------|--------|--------|--------|
| | | 1/125 | 1½/40 | 2/50 | 3/80 | 4/100 | 5/125 | 6/150 | 8/200 | 10/250 | 12/300 | 14/350 | 16/400 |
| <i>Quick-Lock</i> | 3 | 4 | 4 | 3 | 3 | 1 | 1 | 1 | ½ | — | — | — | — |
| | 5 | — | — | 6 | 5 | 2 | 1 | 1 | 1 | ½ | ½ | — | — |
| | 8 | — | — | — | — | 5 | 2 | 2 | 2 | 1 | ½ | ½ | ½ |
| <i>Taper-Taper Joints</i> | 3 | — | — | 5 | 4 | 3 | — | 1 | 1 | ½ | — | — | — |
| | 5 | — | — | 10 | 7 | 5 | — | 2 | 1 | 1 | ½ | — | — |
| | 8 | — | — | — | — | 8 | — | 3 | 2 | 1 | 1 | ½ | ½ |

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 and Precautions

Hardener: The hardener is irritating to skin, eyes and respiratory tract. It is toxic orally and may cause sensitization. Avoid contact with eyes, skin or clothing. Avoid breathing vapors. Wear rubber gloves, protective apron and NIOSH-approved respirator. Wash thoroughly after handling.

Resin: The resin may be mildly irritating to skin, eyes and respiratory tract. Avoid contact with eyes, skin or clothing. Avoid breathing vapors. 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.

Call Chem Tel for chemical emergencies, spills:

**Hotline/MSDS Fax Access
800-255-3924**

**Internationally
Call +01-813-248-0585**

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