# Urethane Prepolymers

## **Bonding Cured ADIPRENE**

### BONDING CURED ADIPRENE TO CURED ADIPENE

- 1. Clean the ADIPRENE® urethane rubber surface by buffing lightly then wash with toluene or methyl-ethyl-ketone (MEK). Allow the solvent to evaporate completely.
- 2. Mix equal parts by volume of THIXON<sup>TM</sup> 412 and THIXON<sup>TM</sup> 415. The mixture is useable for six to eight hours
- 3. Apply one coat of THIXON 412/415 to each surface and allow to dry for about 30 minutes but no more than 60 minutes. At this time, the surface will be slightly tacky and solvent free, although it may appear to be fluid. If the film is not wet and tacky apply a second coat and allow to dry 30 minutes.
- 4. Press the cement coated surfaces together using only enough pressure to ensure intimate contact and prevent air entrapment. In about 2 hours the cement will set up firm, but will not be cured.
- 5. Curing may be done according to any one of the following:
  - a. Allow to sit for 5 to 7 days at room temperature.
  - b. Heat 24 hours at 50°C (122°F)
  - c. Heat 16 hours at 65 to 70°C.
  - d. Heat 8 hours at 80 to 85°C.
  - e. Heat 2 to 3 hours at 100°C.

THIXON<sup>TM</sup> is a registered trade name of Rohm and Haas Company.



## **Bonding Cured Urethane**

#### CURED URETHANE TO METAL – ROOM TEMPERATURE BOND

- 1. clean, abrade and degrease the metal surface. Apply one coat of Thixon 403/404 and allow to dry 30 minutes or longer. Several weeks of storage is permissible at this point.
- 2. Apply one coat of Thixon 412/415 on the clean, buffed urethane rubber surface. While still tacky press on to the cement coated metal surface. In a few hours a strong bond will form. This bond will increase in strength for several weeks.

### **CURED URETHANE TO METAL – HEAT CURING**

The following procedure will produce very strong bonds between cured urethane and most all metals including aluminum, brass, copper, steel, stainless steel and titanium.

- 1. Prepare the metal surface by abrading and degreasing thoroughly. Apply one coat of Thixon 403/404 primer.
- 2. Allow cement film to dry, then heat to 100 to 110C for 10 to 30 minutes. Cool to room temperature.
- 3. apply one coat of Thixon 412/415 blend to the cement coated metal surface and to the clean, buffed urethane surface. Allow to dry to 30 to 60 minutes then pres surfaces together and cure as described previously for Thixon 412/415.

### CURED URETHANE TO EXPOXY FIBERGLASS, ETC.

Cured urethanes can be bonded to epoxy fiberglass, polyester fiberglass and some other plastic type surfaces by using the above procedure. Thixon 412/415 is the preferred primer for these materials.

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