

## Technical Data UNTINTED ADHESIVE

# M1001 Resin / M2003 Hardener

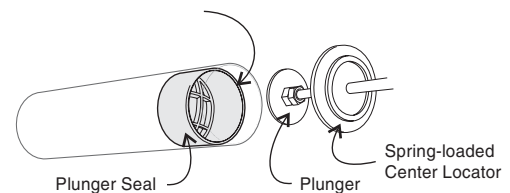
PRO-SET Adhesives are pre-thickened, two-part epoxy adhesives formulated for secondary bonding of laminated composites as well as steel, aluminum, cast iron, concrete, stone, and most wood species. PRO-SET Adhesives will bond these materials to one another in any combination. This versatility fits the requirements of the marine and composites industries, as well as the architectural, transportation, and civil engineering fields.

### MIXING

The two-cartridge system provides accurate and convenient dispensing of the adhesive. Manual or air-powered dispensing guns force resin and hardener through the static mixing wand and makes application of a uniform bead of mixed adhesive fast and easy. The M1001 untinted resin and M2003 untinted hardener eliminates the color change available with the standard PRO-SET adhesives, so exercise extra care to ensure thorough mixing.

### DISPENSING

1. Place the cartridge set in the gun—push the back of the cartridges against the spring-loaded center locator, and drop the front of the cartridge set into the vertical slot at the head of the gun. Push the plungers in to contact the back of the plunger seals inside the cartridge barrels. Be sure the plungers are seated against the centers of the seals and not caught on the seal lip.



2. Remove the locknut and plugs from the cartridge spouts. Equalize the level of resin and hardener in the cartridges by squeezing the trigger until a small amount of both resin and hardener are dispensed. This assures that the first adhesive through the mixing wand will be at the correct ratio. Mix the waste resin and hardener, and dispose of it after it has cured.

3. Place the mixing wand over the spouts and secure it with the locknut. Cut the tip for the appropriate sized bead.

4. Dispense the adhesive as needed. Dispense adhesive at 60°F or above to assure the proper mix ratio. Refer to the cartridge labels or the Technical Data information for cure times and additional information. Refer to the MSDS for additional safety information.

## APPLICATION

Apply the mixed adhesive to one or both mating surfaces of the joint. Spread the mixture evenly over surfaces. Use enough adhesive to ensure complete filling of any gaps along the joint. Allow the adhesive to cure thoroughly before stressing the joint.

## COVERAGE

One cartridge set dispenses approximately 47 ft of ¼" bead, or 17 ft of ½" bead.

## TECHNICAL DATA M1001 / M2003

The gel and cure times are affected by ambient temperature and epoxy mass, or bead thickness. Curing data is based on 72°F (22°C) ambient temperature. Warmer temperatures and a larger mass will increase cure speed, reducing working time. Cure time is reduced by approximately one half with every 18°F (10°C) increase in temperature. A smaller mass or cooler temperature will increase the cure time. Always dispense the adhesive at 60° F or above to assure the proper mix ratio.

Mix Ratio by Volume	2:1
Mixed Density (lb/gal)	9.5
Pot Life of 100g mass @ 72°F	51 minutes
Dwell Time in mixer @ 72°F	70 minutes
Working Time* (½" bead) @ 72°F	150 minutes
Minimum cure temperature	65°F
Clamps off cure time (1/16" bond line @ 72°F)	16 hours

## CURED CHARACTERISTICS

Lap Shear (psi) A-366 steel ASTM D-1002-72 . .	1,982
Lap Shear (psi) 2024T aluminum ASTM D-1002-72	1,975
Tensile Adhesion (psi) A-366 steel ASTM D-4541	2,584
Tensile Adhesion (psi) 2024T aluminum ASTM D-4541	1,715

For additional physical properties, see the PRO-SET Adhesive data sheet. M1001/M2003 is 175/277 with no color added.

We recommend testing any product using proposed materials and procedures to confirm working and curing characteristics under your shop conditions.

*\* Working time may be extended by applying adhesive to both surfaces of the bond line*