Directions for bonding polyethylene:

1. Note caution information on glue cartridge.
2. Clean and roughen all bonding surfaces.
3. Polyethylene must be flame treated to ensure a strong bond.
   - Fit a propane torch with a flame spreader.
   - Following the operating cautions of the propane torch, ignite the flame.
   - Observe the flame in a darkened room, noting the primary (bright blue) and secondary (faint yellow) portions of the flame. (See drawing below)
   - Adjust the flame so that the primary flame is contained within the spreader, and the secondary flame is 1-1/2” beyond the spreader. (see drawing)
   - Treat the polyethylene to be bonded with the tip of the secondary flame by passing it over the polyethylene in 5 gentle strokes. Total exposure to the flame should be 2-3 seconds (.5 seconds per stroke). This light exposure should not deform or melt the polyethylene in any way.
   - Test the polyethylene for bond readiness by wetting it with water. If the water beads up and runs off immediately, the treatment was not effective. If the water sheets on the surface, the surface is ready for bonding. If unsure, compare water’s action on the treated area with an untreated area.
   - Bond joints within 1 hour after treating. Always prepare test bonds to be certain that flame treating is effective with your material.
4. Twist and remove cap from glue cartridge
5. Push mixing nozzle onto the cartridge, twist 1/4 turn clockwise to lock.
6. Insert cartridge in glue dispenser.
7. Apply to bonding surfaces, press together leaving glue between joints.
8. Working time = 15-30 min.
9. Handling time = 1-2 hrs.
10. Full Cure time = 24 hrs.
11. Remove nozzle and discard. Replace cap on glue cartridge.
12. Apply to wet or dry surface.
13. Cold temps slow cure time.

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TAP Poly-Weld Adhesive

Description
TAP Poly-Weld Adhesive is a flexible, toughened, non-corrosive, structural adhesive specially designed for various applications and substrates, including bonding of Polyethylene*, Polypropylene*, ABS, PVC, ceramics and cement. It has been formulated for superior exterior performance, gap filling, impact and fatigue resistance. Its toughness, imparted by flexibility, causes the energy required to break a bond to be significantly higher than brittle epoxies. Lap Shear Psi, plus high break-energy Psi afford bonds strength/resiliency. *Bond results to Polyethylene and Polypropylene after executing AAI's flame-treating instructions.

Typical Properties

Mixed Color ................................................................. White
Thixotrophy .......................................................... Non-sagging gel
Elongation (%) ........................................ 100+
% Solids (by Volume) ..................................................... 100
Viscosity (@ R.T., cps) ....................................... (Resin 245,000) (Hardener 178,000) cps
Density (gr./cc)
Resin ................................................................................. 1.25
Hardener ................................................................................ 0.99
Mixing Ratio
(PBW) .................................................................................. 1.27:1
(PBV) .................................................................................. 1:1
Working Time (7 gr. Min) .............................................. 15-30
Cure Cycle (at 23°C)
Handling Time ........................................................................ 1-2 hours
Functional Cure .................................................................. 24 hours
Full Cure ................................................................................. 7 days
Tensile Strength (Psi) ...................................................... 1,150+
Lap Shear (Psi)
ABS .......................................................... 800+
Aluminum .......................................................... 1,000+
Ceramic (compressive shear) ................................................. 1,500+
Cold Rolled Steel .......................................................... 1,500+
Concrete (compressive shear) ............................................... 2,000+
Copper ................................................................................. 1,000+
Fiberglass gel coat .............................................................. 1,000+
Low Density Polyethylene (PE) ........................................ 500+
High Density Polyethylene (HDPE) ................................... 2,000+
Polypropylene .......................................................... 1,500+
PVC .......................................................... 1,400+
Acrylic ................................................................................. 500-700

Flexural Modulus (Psi) ................................................. 8,000+
Service Temperature ............................................. -40F-200°F
UV Resistance ................................................................. Discolor

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