



Bay Area Garden Railway Society

TAP Plastics, Inc. Jan. 23, 2010

ADHESIVES for your Garden Railway

"Gluing one thing to another"

By Dave Connery for the 2006 NGRC

Conditions when selecting an Adhesive

Materials to be joined

Nature of mating surfaces: Close, machined fit. Uneven surfaces and large -vs- small surface

Tension on Joint: Handled location, under a load or only detail

How to Improve glue joints: Work to get a good surface match. Seal porous surfaces. Clean surfaces. Add mechanical strength (pin/nail/screw) and Clamp.

Wood to Wood

Best: Urethane (Gorilla Glue), Epoxy, Titebond III, E-6000 Adhesive and Solvent based Contact Cement.

Adequate: ACC and Titebond II

Poor: Hot Glue and Carpenters Glue

Not Reliable: White Glue and Liquid Nails

Wood to Plastic

Best: Epoxy, E-6000, Silicone glue and Water-based Contact Cement

Adequate: Hot Glue and ACC Gap filling

Poor: ACC thin

Not Reliable: White or Yellow glues

Wood to Resin

Best: Epoxy, E-6000, Silicone and Solvent based Contact Cement

Adequate: Hot Glue and ACC Gap filling

Poor: Acc thin

Not Reliable: White or Yellow glues

Wood to Glass

Best: Silicone and E-6000

Adequate: Solvent based Contact Cement

Plastic to Plastic

Best: Solvent based Plastic Cement, E-6000 and Epoxy

Adequate: Contact Cements, ACC Gap filling and thin

Poor: Hot Glue

Not Reliable: White or Yellow glues

Plastic to Metal

Best: Epoxy and E-6000 Adhesive

Adequate: Contact Cements and ACC Gap filling and thin

Poor: Hot glue

Not Reliable: Plastic Solvent Cements

Plastic (or Resin) to Resin

Best: Epoxy and E-6000

Adequate: Contact Cements, ACC Gap filling and thin

Poor: Hot Glue

Not Reliable: Plastic Solvents

Metal to Metal

Best: Solder, Epoxy, ACC and E-6000

Adequate: Urethane, Contact Cements and Silicone

Poor: Hot Glue