WHICH Glues TO CHOOSE
WHAT ADHESIVE WORKS BEST FOR YOUR APPLICATION

1. Joint Design - proper design can maximize performance.
2. Surface Preparation - amount of preparation should be consistent with your requirements.
5. Pressure Equipment - must provide uniform pressure over the entire bonded area.

Stresses

1. Tensile stress is exerted equally over the entire joint straight and away from the adhesive bond. The bonded materials are forced to slide over each other.
2. Shear stress is concentrated along a thin line at the bond's edge. One surface is flexible.
3. Cleavage stress is concentrated at one edge and exerts a prying force on the bond.

Bonded Joints

Lap Joint
Butt Joint
Cylindrical Joint
Angle Joint
Corner Joint

5 Steps to Ensure Optimum Performance

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2. Surface Preparation - amount of preparation should be consistent with your requirements.
5. Pressure Equipment - must provide uniform pressure over the entire bonded area.

Types of Adhesives

ACRYLIC: A structural adhesive capable of bonding a broad range of substrates with good flexibility. Works best bonding.

CYANOACRYLATE: One-part adhesive that cures instantly on contact with matted surfaces. Excellent adhesion to a variety of substrates. Works best bonding.

HOT MELT: A thermal plastic melted and applied in a molten state, wetting the surface. As it cools, it solidifies forming a bond. Works best bonding.

SILICONE: One component adhesive that cures to a tough, rubbery solid upon exposure to moisture in the air. Works best bonding.

WATER-BASED: One-part evaporation system. Water-based adhesives can be used in a wide variety of non-structural bonding applications. Works best bonding.

ANAOBERIC: One-part adhesive that cures only in the absence of air. Designed for locking screws, nuts, bolts and/or retaining bearings. Works best bonding.

EOXY: Epoxy provides high strength bonds on a wide variety of substrates. Works best bonding.

POLYURETHANE: Superior bonds with minimal surface prep for high performance thermoplastics. Cures via a catalyst, heat or air evaporation. Works best bonding.

SOLVENT-BASED: One-part solvent evaporation system with a rubber or plastic base. Good product for laminating or covering a large surface. Works best bonding.

Definition

Glue/Adhesive [gloo]/[ad-hee-siv, -ziv] noun:
1. A material used to stick two substrates or parts together.
2. A substance capable of holding materials together by surface attachment.

Questions? Ask the Glue Doctor® at ellsworth.com

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