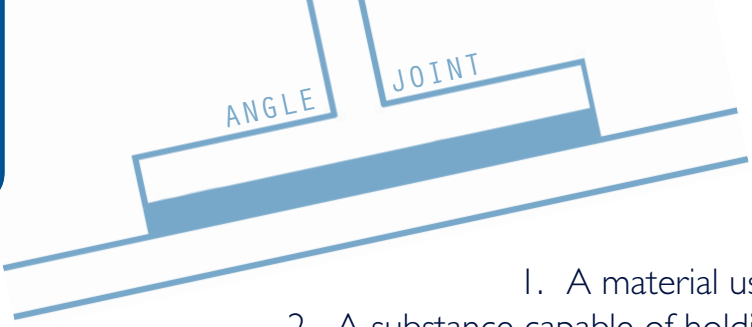


Which Glues to Choose

WHAT ADHESIVE WORKS BEST FOR YOUR APPLICATION

Types of Adhesives



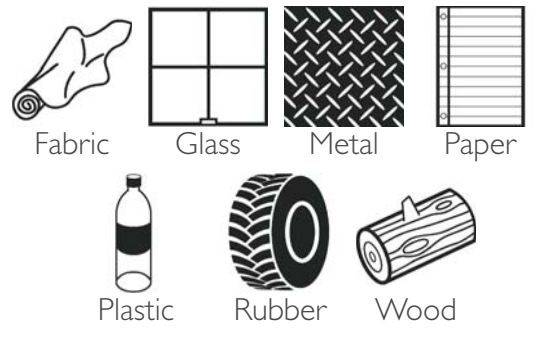
Definition

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.

SYMBOL KEY

Substrates (what's getting glued)

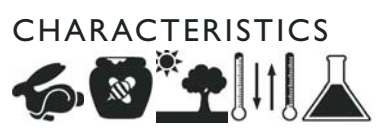
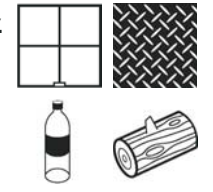


Characteristics (features of the adhesive)



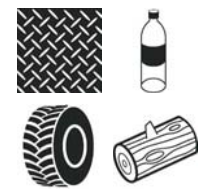
Acrylic:
A structural adhesive capable of bonding a broad range of substrates with good flexibility.

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



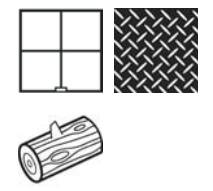
Anaerobic:
One-part adhesive that cures only in the absence of air. Designed for locking screws, nuts, bolts and/or retaining bearings.

WORKS BEST BONDING



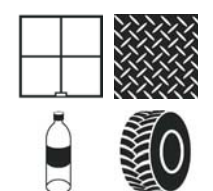
Epoxy:
Epoxies provide high strength bonds on a wide variety of substrates.

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



Hot Melt:
A thermal plastic material melted and applied in a molten state, wetting the surface. As it cools, it solidifies forming a bond.

WORKS BEST BONDING



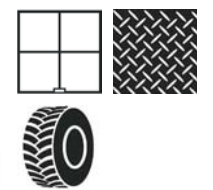
Solvent-based:
One-part solvent evaporation system with a rubber or plastic base. Good product for laminating or covering a large surface.

WORKS BEST BONDING



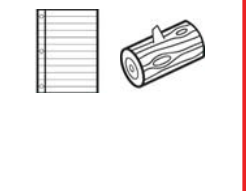
Silicone:
One component adhesive that cures to a tough, rubbery solid upon exposure to moisture in the air.

WORKS BEST BONDING

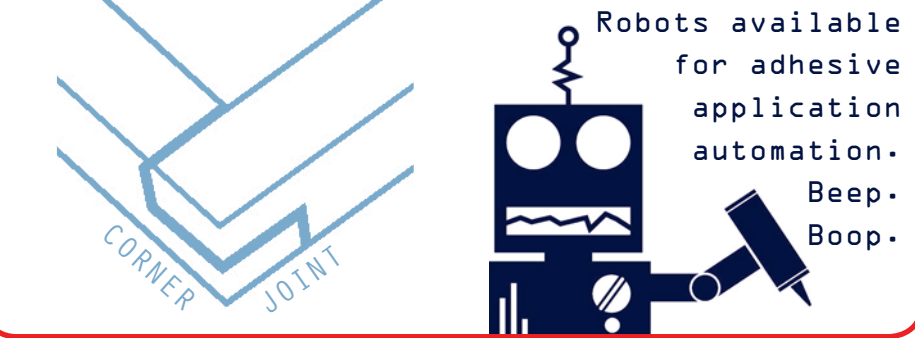
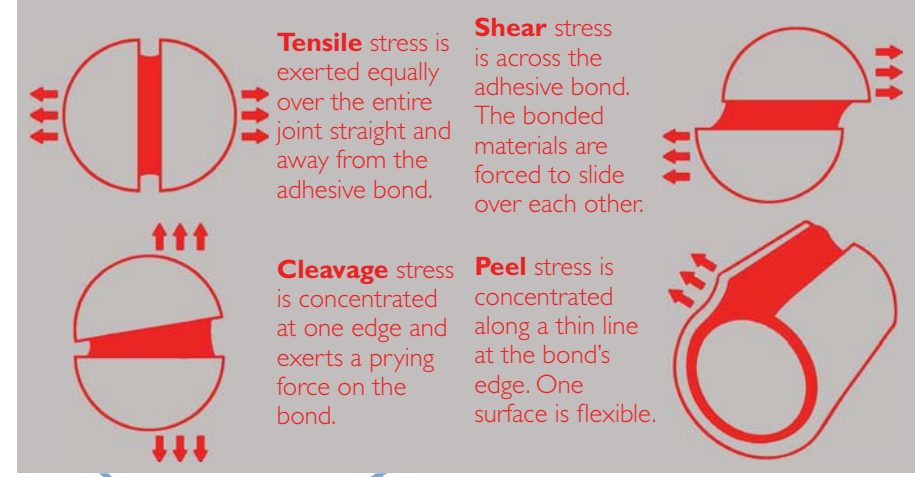


Water-based:
One-part evaporation system. Water-based adhesives can be used in a wide variety of non-structural bonding applications.

WORKS BEST BONDING

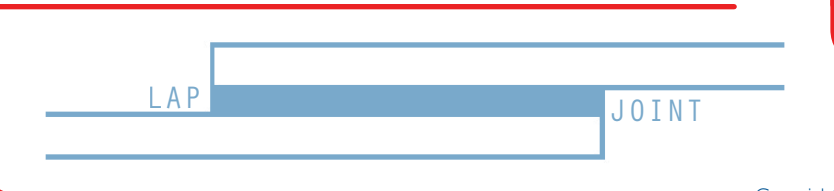
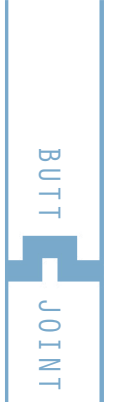


STRESSES



DID YOU KNOW?

The term "off to the glue factory" refers to before the 20th century when deceased horses were made into glue by boiling down their hooves and hides. Many other animals were used to make glue including fish and rabbits. Synthetic glues have replaced the use of animal glues, except in extremely rare cases.



- ### 5 STEPS TO ENSURE OPTIMUM PERFORMANCE
- I. **Joint Design** - proper design can maximize adhesive performance.
 - II. **Surface Preparation** - amount of preparation should be consistent with your requirements.
 - III. **Application Methods** - manual, pneumatic, automated, metering and mixing.
 - IV. **Heat Curing Equipment** - many methods available.
 - V. **Pressure Equipment** - must provide uniform pressure over the entire bonded area.

Infographic created by **ELLSWORTH ADHESIVES**
Global Distributor of Adhesives & Specialty Chemicals
Questions? Ask the Glue Doctor® at ellsworth.com