

# WHICH GLUES TO CHOOSE

WHAT ADHESIVE WORKS BEST FOR YOUR APPLICATION



## Definition

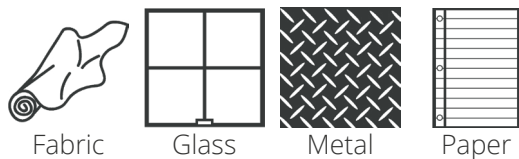
**Glue/Adhesive** [gloo]/[ad-hee-siv, -ziv] noun:

1. A material used to stick two substrates or parts together.
2. A substance capable of holding materials together by surface attachment.

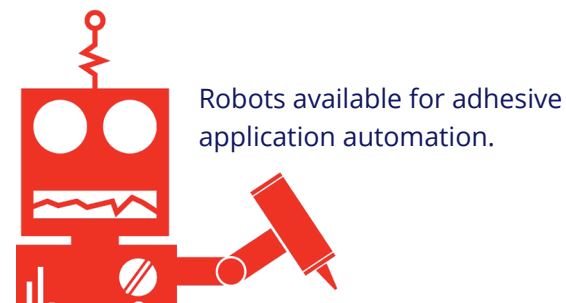
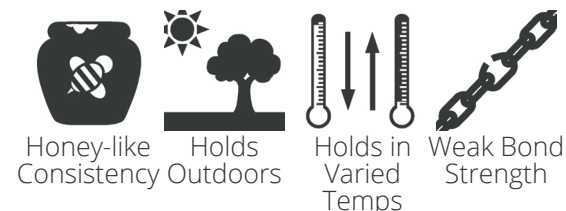
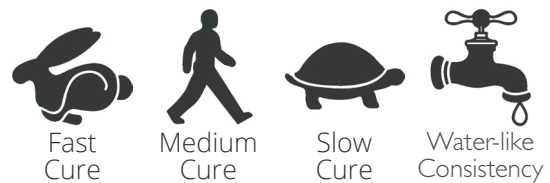
## TYPES OF ADHESIVES

### SYMBOL KEY

Substrates (what's getting glued)



Characteristics (features of the adhesive)



Robots available for adhesive application automation.

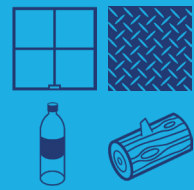
### ACRYLIC:

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

#### CHARACTERISTICS



#### WORKS BEST BONDING



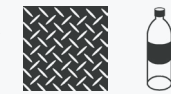
### ANAEROBIC:

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

#### CHARACTERISTICS



#### WORKS BEST BONDING



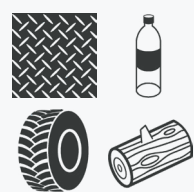
### CYANOACRYLATE:

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

#### CHARACTERISTICS



#### WORKS BEST BONDING



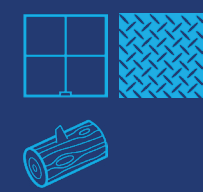
### EPOXY:

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

#### CHARACTERISTICS



#### 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.

#### CHARACTERISTICS



#### WORKS BEST BONDING



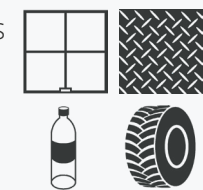
### POLYURETHANE:

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

#### CHARACTERISTICS



#### WORKS BEST BONDING



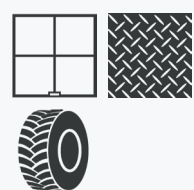
### SILICONE:

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

#### CHARACTERISTICS



#### WORKS BEST BONDING



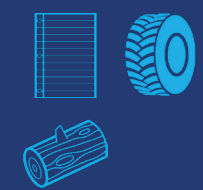
### SOLVENT-BASED:

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

#### CHARACTERISTICS



#### WORKS BEST BONDING

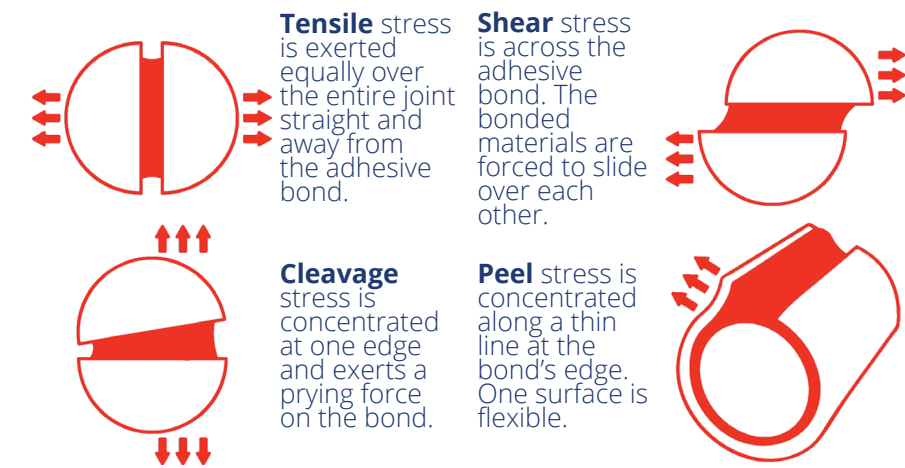


### 5 STEPS TO ENSURE OPTIMUM PERFORMANCE

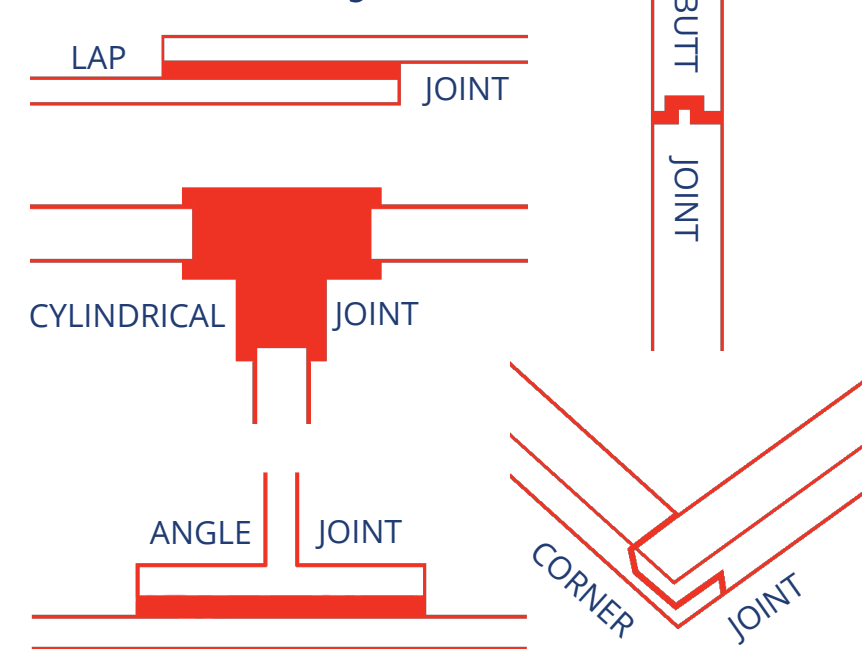
1. Joint Design - proper design can maximize performance.
2. Surface Preparation - amount of preparation should be consistent with your requirements.
3. Application Methods - manual, pneumatic, automated, metering and mixing.
4. Heat Curing Equipment - many methods available.
5. Pressure Equipment - must provide uniform pressure over the entire bonded area.

## STRESSES

One of the primary benefits of an adhesive is that it holds something together resisting the stress trying to pull it apart.



## BONDED JOINTS



Infographic created by



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Questions? Ask the Glue Doctor® at [ellsworth.com](http://ellsworth.com)