

Designing with Structural Adhesives

# 5 Structural Adhesives Myths Disproved

If you're a materials or design engineer working on assembling specialty vehicles, signage, electronics, appliances or other industrial products, you may have heard some myths about working with structural adhesives. Here's why they're nothing but tall stories.

#1

## Myth #1 Structural adhesives don't hold.

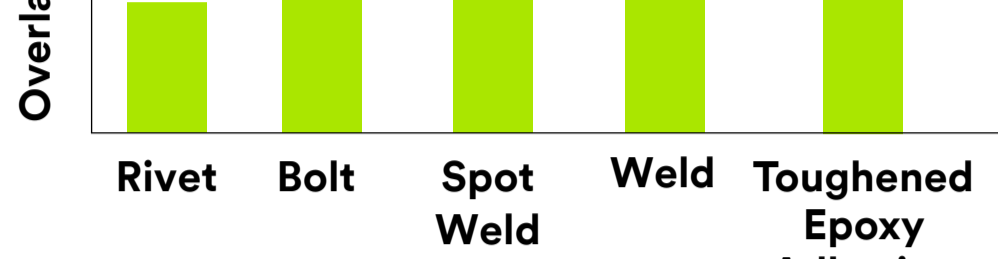
**Disproved: Consider the evidence.**

3M Structural Adhesives can outperform "traditional" attachment methods like screws, rivets and spot welds.

Cured 3M Epoxy Adhesives have

**2-3X overlap shear strength**

of spot welds and other mechanical fasteners.



Data was collected by 3M, <https://multimedia.3m.com/mws/media/6469940/3ms-tough-stuff-white-paper.pdf>, <https://multimedia.3m.com/mws/media/10540520/acrylic-adhesives-recent-advancements-white-paper.pdf>

**Don't believe it?**

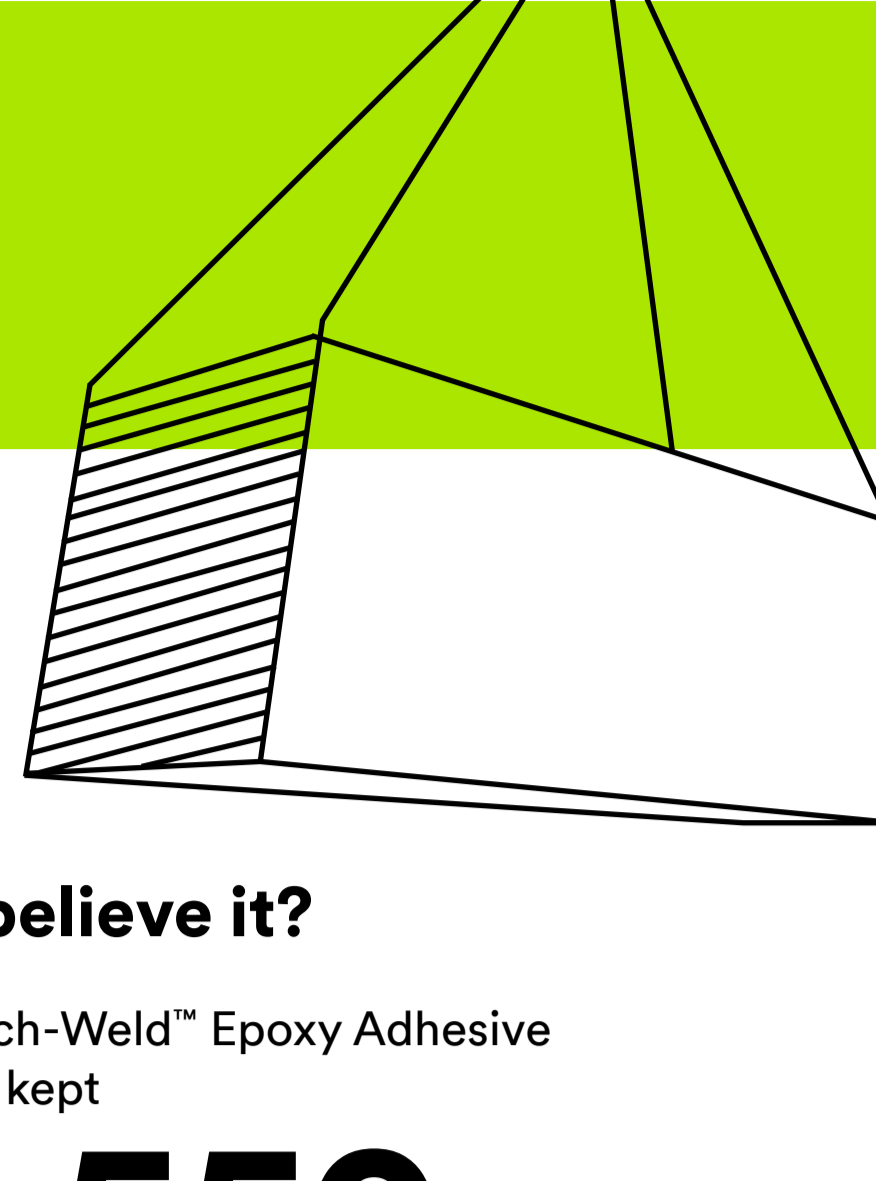
3M™ Scotch-Weld™ Epoxy Adhesive DP420NS kept

**14,550 lb**

**airborne**

for over 24 hours.

[Watch video >](#)



#2

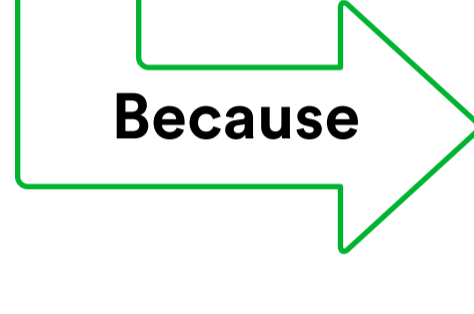
## Myth #2 Holding pieces together is all that matters.

**Disproved: Proper planning can improve performance.**

Evaluating your *entire* process could influence the bonding solution you should choose for maximum benefit.

**Think about:**

- ✓ Surface prep
- ✓ Refinishing
- ✓ Final uses
- ✓ Environmental exposure
- ✓ Aesthetics



**3M Structural Adhesives can:**

- ✓ Save production time
- ✓ Eliminate steps
- ✓ Cut welding costs
- ✓ Increase productivity output
- ✓ Enhance design
- ✓ Be automated
- ✓ Be tested to avoid over-engineering

**3M Adhesives helped individual customers:**

**Reduce weight**



**by 17%\***

**and improved aesthetic design.**

[See how >](#)

**Increase output**

**35% ➡ 98%\***

[See how >](#)

\*Results specific to each unique customer process and adhesive application. Individual results may vary.

#3

## Myth #3 "I've tried one so i've tried them all."

**Disproved: Different adhesives offer different properties.**

The bonding continuum offers different adhesive options, strengths, viscosities, open times, resistance properties, and flexibility and rigidity levels.

**Viscosity Ranges:**



**1 to 180k cP**

**Overlap Shear Strength:**



**1k to 4.6k psi**

**Work Times:**



**Instant to 90 minutes**

**Elongation/flexibility:**



**2 to 860%**

[See all products >](#)

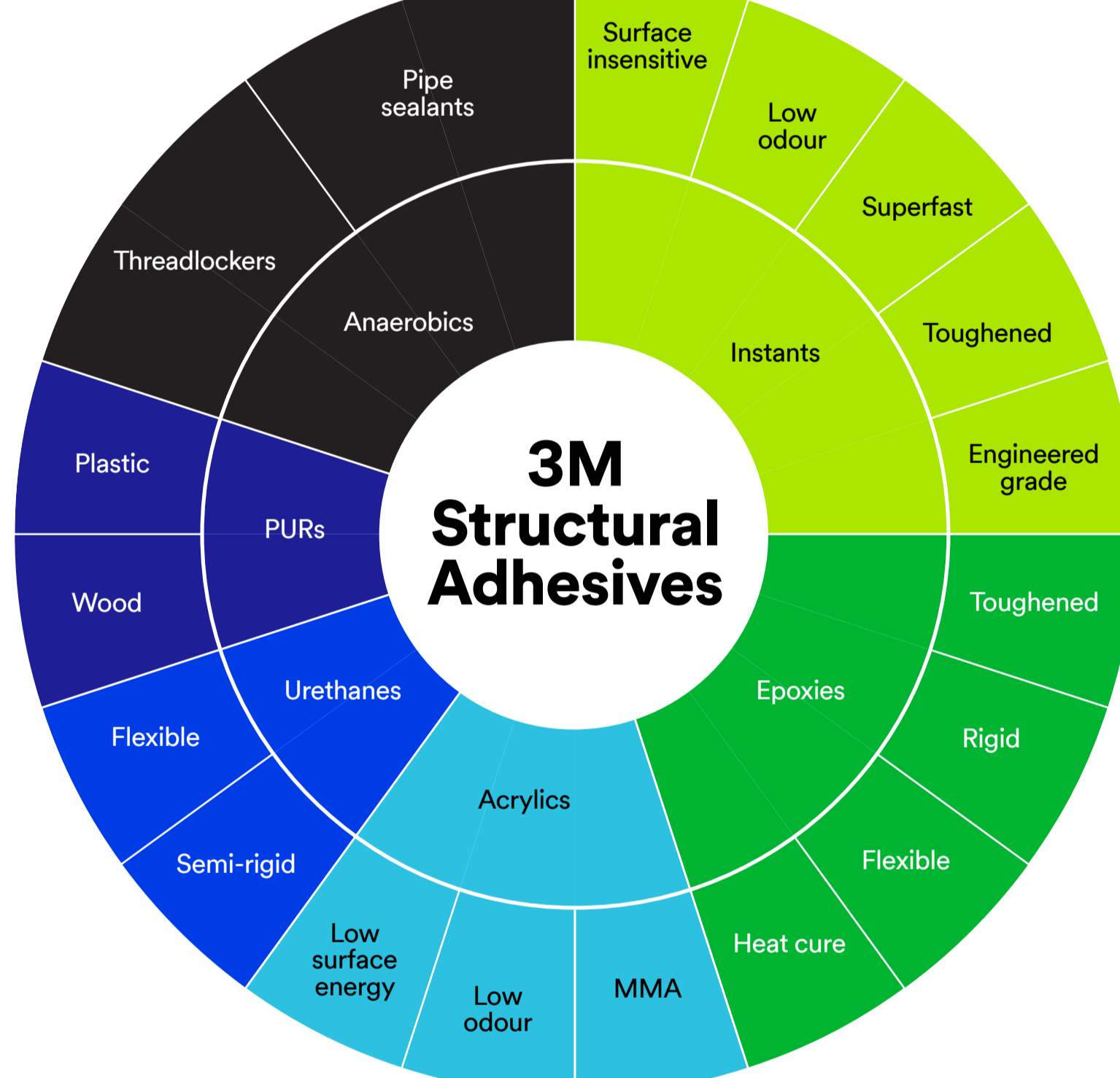
#4

## Myth #4 All structural adhesives are epoxies.

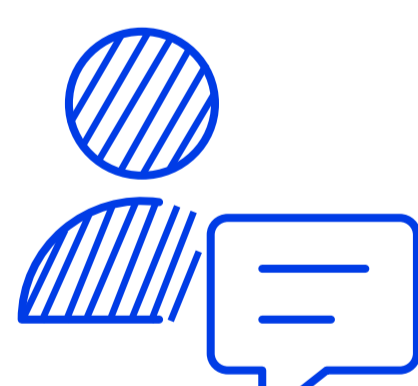
**Disproved: Not all structural adhesives are made the same.**

Beyond just epoxies, 3M Structural Adhesives offer a variety of product families, chemistries, sizes and configurations.

**20 chemistries in 7 product families. 24 sizes and configurations from samples to drums for your automated processes.**



**We can help find the option right for you.**



#5

## Myth #5 "I'm on my own to figure this out."

**Disproved: 3M is here to help.**

Adhesives are core to some of our most iconic brands, so we have the technical expertise and global resources to help you bring your concept to life.



**3M Structural Adhesives are backed by:**

**75+**

**Global Adhesive Specialists**

**35+**

**Global Application Engineers**

**3**

**Global Dispense Labs**

**40+ years**

**in Structural Adhesive Manufacturing**

**Got a question or project? Bond with us:**

[1-800-362-3550](tel:1-800-362-3550)

[3M.ca/StructuralAdhesives](https://3M.ca/StructuralAdhesives)

**3M™ Scotch-Weld™ Structural Adhesives**

**Stronger.  
Differently.  
Faster.**

**We Help You Make It. Better.**

**Tougher.  
Resilient.  
Lighter.  
To Spec.**

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