

Designing with Structural Adhesives

5 Structural Adhesives Myths Disproved

If you're a materials or design engineer working on assembling specialty vehicles, signage, electronic, 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

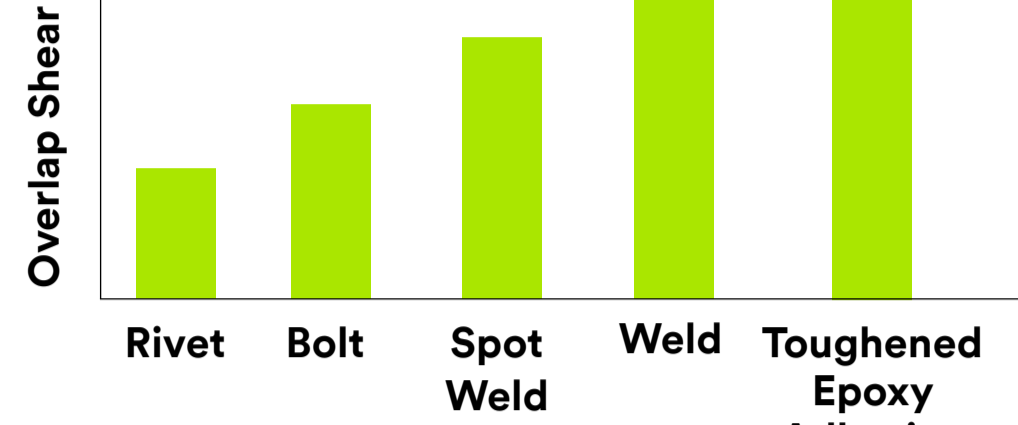
Myth #1 Structural Adhesives Don't Hold

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>

3M™ Scotch-Weld™ Epoxy Adhesive DP420NS kept

14,550 lbs. airborne for over 24 hours.

[Watch video >](#)

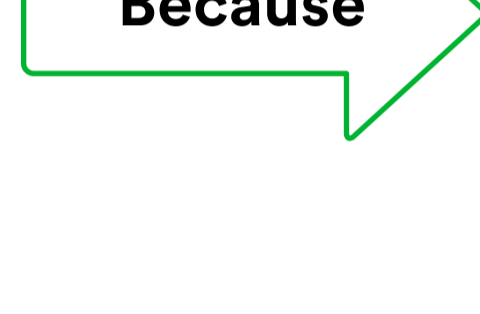
#2

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 labor hours by

50%*

[See how >](#)

Achieve assembly times

5X* faster

[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

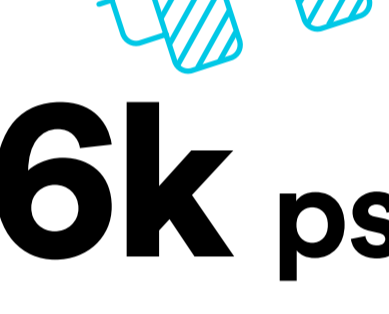
The bonding continuum offers different adhesive options, strengths, viscosities, open times, resistance properties, and flexibility and rigidity levels.

Viscosity Ranges:



1 to 180k cP

Overlap Shear Strength:



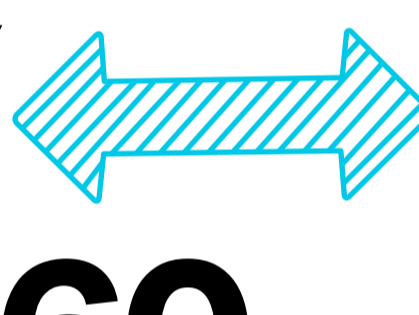
1k to 4.6k psi

Work Times:



Instant to 90 minutes

Elongation/flexibility:



2 to 860%

[See all products >](#)

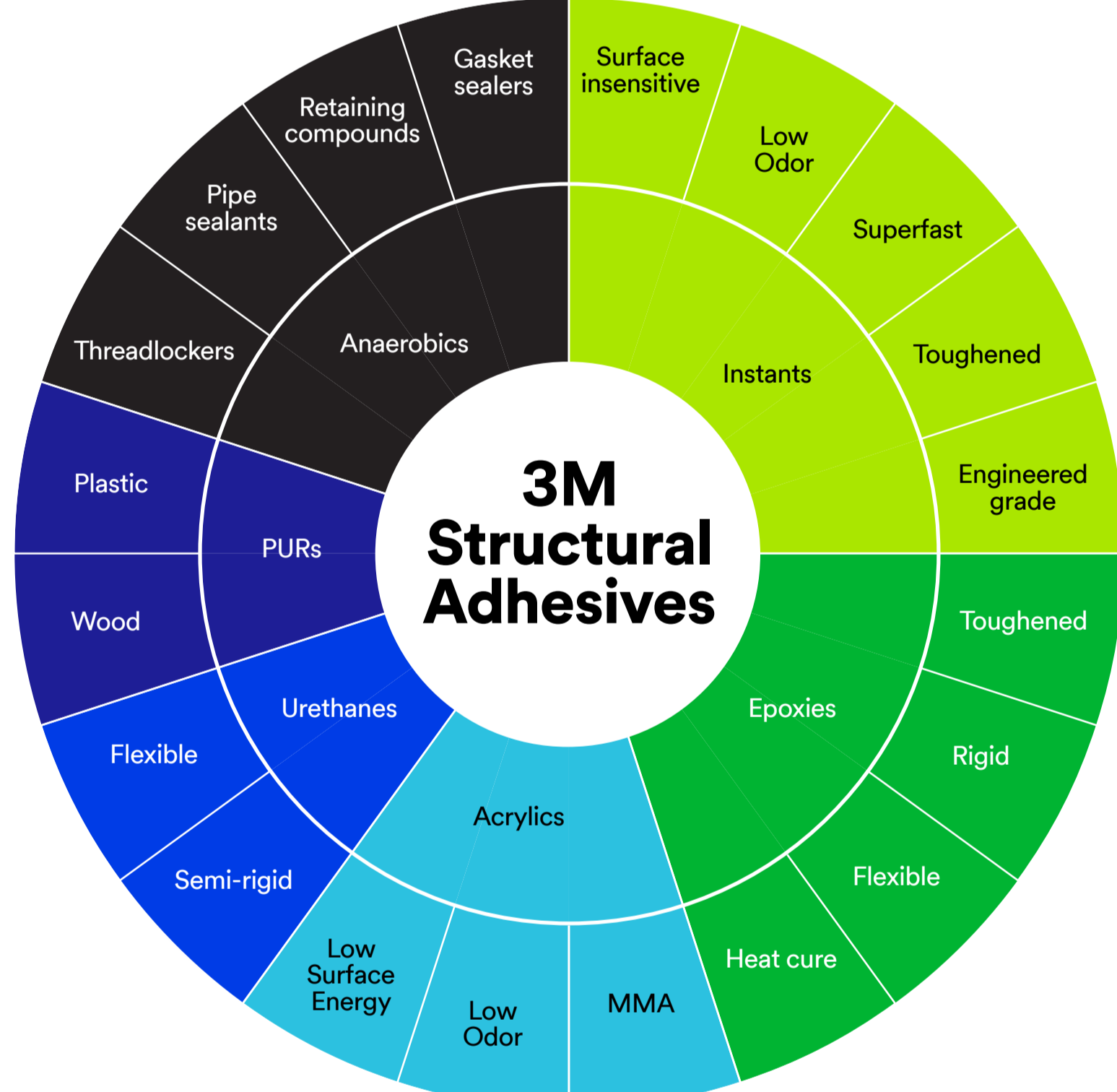
#4

Myth #4 All Structural Adhesives are Epoxies

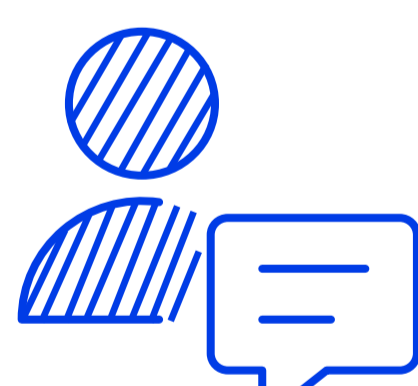
Disproved: Not All Structural Adhesives are Made the Same

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.



[Talk to a rep >](#)

#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 cost-effectively 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
- 3M.com/StructuralAdhesives
- 3mproducts.adhesives.us@mmm.com

3M™ Scotch-Weld™ Structural Adhesives

We Help You Make It. Better.

Stronger. Differently. Faster.

Tougher. Resilient. Lighter. To Spec.