

TWEHA® ADHESIVES DON'T MELT AT HIGH TEMPERATURES

Built to Perform When the Heat Is On

A common misconception is that all adhesives soften or melt when exposed to high temperatures. While this may be true for some adhesive technologies, it certainly does not apply to TWEHA® Adhesives.

Our high-performance structural adhesives are engineered with a crosslinked polymer technology that enables them to maintain their integrity under extreme conditions. Instead of melting, they retain their structural performance and continue to provide reliable, durable bonds.

Designed for Demanding Applications

TWEHA® Adhesives are trusted in industries where failure is simply not an option, including:

- Truck and trailer manufacturing
- Bus and coach construction
- Boat and yacht building
- Composite panel production
- Facade and architectural applications
- Industrial assembly

They provide outstanding resistance to rain, snow, UV radiation and extreme weather conditions while maintaining a clean, durable and aesthetically pleasing bond line.

Temperature Resistant from -40°C to 200°C

TWEHA® Adhesives performs reliably in temperatures ranging from -40°C up to 200°C. However, one important factor determines how any adhesive performs under heat: time.

Short-Term Heat Exposure

When exposed to temperatures up to 200°C for short, intermittent periods, TWEHA® Adhesives maintain their mechanical properties and continue to perform as intended.

Continuous Heat Exposure

If an adhesive is continuously exposed to temperatures around 200°C, its properties will gradually change over time. The material becomes harder and less elastic, reducing its long-term performance. This behavior is normal for polymer-based materials and should always be considered when selecting an adhesive for high-temperature applications.

What Happens at Higher Temperatures?

Extensive testing demonstrates how TWEHA® Adhesives respond to increasing temperatures:

- Up to 150°C: virtually no noticeable change, even after approximately 45 minutes.
- Around 200°C: the adhesive gradually becomes harder and less flexible during prolonged exposure.

- Above 300°C: extreme temperatures accelerate the ageing process, causing the material to lose flexibility much more rapidly.

The key point is this: the adhesive does not melt. Instead, prolonged exposure to excessive heat slowly changes the material's mechanical properties without turning it back into a liquid.

Why TWEHA® Adhesives Don't Melt

The answer lies in chemistry. TWEHA® Adhesives cure into a crosslinked polymer network. During curing, strong chemical bonds are formed between the polymer chains, creating a three-dimensional structure that cannot simply melt and flow again when heated. Unlike thermoplastic adhesives, which soften and melt as temperatures rise, thermoset adhesives such as TWEHA® maintain their solid structure. At extremely high temperatures they may gradually degrade, but they will not liquefy.

Confidence Under Extreme Conditions

Whether your application is exposed to harsh weather, elevated temperatures or demanding mechanical loads, you need an adhesive you can trust.

With TWEHA® Adhesives you benefit from:

- No melting at high temperatures
- Excellent weather, UV and moisture resistance
- High structural bonding strength
- Long-term durability and flexibility
- Proven performance in transportation, marine and construction industries

TWEHA® Adhesives – Engineered to Perform. Built to Last.

TWEHA®, 2026