

TWEHA® ADHESIVES DO NOT MELT AT HIGH TEMPERATURES!

Many adhesive users still believe that all adhesives simply melt when exposed to high temperatures. Modern high-performance adhesive technology behaves very differently. At TWEHA®, our professional bonding systems are specifically developed to perform reliably under demanding environmental and thermal conditions.

Designed for Extreme Conditions

One of the most important advantages of TWEHA® Adhesives is their outstanding resistance to weather and temperature exposure.

Our adhesive systems perform exceptionally well in environments exposed to:

- Rain;
- Snow;
- UV radiation;
- Heat;
- Cold;
- Moisture;
- Outdoor ageing.

They maintain both their:

- Bonding performance;
- Aesthetic appearance;

without cracking, splitting, or deforming under normal service conditions. This makes TWEHA® Adhesives highly suitable for applications such as:

- Ventilated façades;
- Thin panel constructions;
- Truck trailers;
- Bus manufacturing;
- Boat and yacht building;
- Industrial panel bonding.

Resistant from -40°C up to 200°C

TWEHA® adhesives can withstand temperatures ranging from -40°C up to +200°C without melting or losing their structural integrity.

However, when discussing temperature resistance, one factor is extremely important: Time. The duration of exposure to high temperatures strongly influences the long-term behavior and lifespan of every adhesive system.

Intermittent Heat vs. Constant Heat

When TWEHA® Adhesives are exposed to temperatures up to 200°C for Short Intermittent Periods they maintain their physical properties and continue to perform reliably. However, if an adhesive is continuously exposed to a constant temperature of 200°C for very long periods, gradual ageing and performance reduction may occur more quickly. This distinction is crucial when specifying adhesives for demanding applications.

What Happens at Higher Temperatures?

At elevated temperatures, TWEHA® Adhesives do not suddenly become liquid or melt. Instead, the material characteristics gradually change depending on:

- Temperature level;
- Exposure duration.

For example:

- At approximately 150°C, very little change occurs, even during longer exposure periods of around 45 minutes;
- At approximately 200°C, the adhesive slowly becomes harder and less elastic over time;
- At temperatures above 300°C, the material properties deteriorate much faster due to the extreme thermal conditions.

But importantly: **The Adhesive Does Not Melt**

Why TWEHA® Adhesives Behave Differently

TWEHA® Adhesives are based on advanced polymer technology.

During curing, the polymers form A Crosslinked Polymer Structure through strong chemical bonds.

Unlike thermoplastic materials, these crosslinked structures do not return to a liquid state when heated.

Although extreme heat may eventually weaken the material over time, the adhesive remains structurally solid instead of melting.

Reliable Performance for Demanding Applications

Modern bonded constructions require adhesive systems capable of handling:

- Thermal movement;
- Outdoor weathering;
- Mechanical stress;
- Long-term temperature exposure.

At TWEHA®, our adhesive systems are specifically developed to provide:

- High thermal resistance;
- Long-term durability;
- Excellent elasticity;
- Reliable outdoor performance;
- Strong structural bonding.

Smart Bonding Technology for Modern Construction

As façade systems and industrial constructions become more advanced, the demands placed on adhesive systems continue to increase.

TWEHA® Adhesives offer a reliable solution for projects where:

- Durability matters;
- Temperature resistance is critical;
- Long-term performance is essential.

Because high-performance adhesive technology is not about melting under heat — it is about maintaining reliability when conditions become extreme.

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