

ALL ABOUT WORKING TIME AND OPEN TIME

When it comes to structural adhesive bonding, timing is everything.

Two of the most important properties of any professional adhesive system are the **working time** — also known as **open time**.

Understanding these characteristics is essential for achieving:

- reliable adhesion,
- efficient installation,
- proper positioning,
- and long-term bonding performance.

What Is Working Time or Open Time?

Working time, or open time, refers to the amount of time available to:

1. apply the adhesive to the first substrate,
2. position the second substrate,
3. and complete the bonded connection successfully.

In simple terms:

it is the period during which the adhesive remains workable and capable of creating a proper bond.

Once this time window has expired, the adhesive surface begins to react, and the bonding quality can no longer be guaranteed.

Why Open Time Is So Important

Correct open time is critical during installation because it directly affects:

- positioning accuracy,
- installation speed,
- bond quality,
- and final structural performance.

If the adhesive cures too quickly:

- adjustments become difficult,
- improper contact can occur,
- and bond strength may decrease.

If the adhesive remains open too long:

- productivity can slow down,
- contaminants may affect the surface,
- and curing performance may become inconsistent.

That is why professional adhesive systems are carefully engineered to provide optimal processing characteristics for real-world construction conditions.

Open Time in Moisture-Curing Adhesives

For moisture-curing products such as:

- TWEHA® SMP adhesives,
- TWEHA® Blacken,
- and TWEHA® WoodProtect,

The open time starts immediately when the adhesive is exposed to air.

These advanced systems react with moisture present in the atmosphere, initiating the curing process automatically.

This technology provides:

- excellent flexibility,
- durable adhesion,
- and reliable long-term performance in façade and construction applications.

Open Time in Two-Component Adhesives

For two-component systems such as **TWEHA® PreFix X-tra**, the process works differently.

In this case, the working time begins the moment:

- the adhesive,
- and the activator or hardener are mixed.

From that point onward, a chemical reaction starts that gradually transforms the material into a fully cured structural bond.

Temperature Has a Major Influence

Like all chemical reactions, adhesive curing behavior is strongly influenced by temperature.

Lower temperatures:

- slow down the reaction,
- resulting in longer working or open time.

Higher temperatures:

- accelerate the reaction,
- creating a shorter working time.

This is completely normal and must always be considered during installation planning.

Humidity Also Plays a Role

For moisture-curing adhesive systems, humidity is another important factor.

Dry conditions:

- slow down curing,
- and extend open time.

Humid conditions:

- accelerate curing,
- and shorten processing time.

This means environmental conditions on-site can significantly influence adhesive performance and handling characteristics.

Professional Bonding Starts with the Right Knowledge

Understanding:

- open time,
- handling time,
- fixture time,
- and curing behavior

is essential for achieving safe and durable bonded connections.

Correct product selection combined with proper processing knowledge helps installers:

- work more efficiently,
- avoid installation errors,
- and guarantee long-term reliability.

TWEHA® Technical Support

With decades of experience in façade bonding and structural adhesive technology, TWEHA® supports professionals with:

- expert technical advice,
- project-specific recommendations,
- and high-performance bonding solutions.

Whether you have questions about:

- open time,
- curing behavior,
- handling characteristics,
- or bonding applications in general, the TWEHA® technical team is ready to help you find the right solution for every project.

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