

UNDERSTANDING THE REAL CAUSE BEHIND FAÇADE BOND FAILURES

One of the questions regularly asked in the façade industry is:

“Is it true that bonded façade panels sometimes come loose after a number of years, especially at the corners?”

The answer is straightforward: When a façade panel is professionally bonded using a certified TWEHA® bonding system and installed correctly, the panel does not come loose.

In rare situations where adhesive connections fail over time, the cause is almost never the adhesive itself. In virtually all cases, failures are the result of:

- Incorrect execution
- Poor detailing
- Inadequate substrate preparation
- Wrong material choices
- Use of unreliable or non-certified adhesive systems

Poor Workmanship Causes Most Problems

Unfortunately, façade panels are still sometimes installed by contractors or subcontractors who underestimate the complexity of bonded façade systems.

To save time or reduce costs, shortcuts are taken during:

- Surface preparation
- Detailing
- Product selection
- Installation procedures

The result is often an inferior façade system that may eventually develop serious long-term problems.

Bonded façade technology requires expertise, precision, and the correct combination of products and detailing.

Why the Right Adhesive System Is So Important

A durable adhesive connection is about far more than simply “sticking” a panel onto a support structure.

A professional bonding system must combine:

- Strong long-term adhesion
- High elasticity
- Resistance to weather influences
- Flexibility during thermal movement
- Moisture resistance
- Long-term structural reliability

Modern façade panels continuously expand and contract due to:

- Temperature fluctuations
- Humidity variations
- Wind loads
- Structural movement

The adhesive joint must be able to absorb these movements without:

- Cracking
- Becoming brittle
- Losing adhesion
- Failing overtime

A high-quality TWEHA® bonding system remains permanently elastic and durable, even after many years of exposure to demanding environmental conditions.

Why Correct Detailing Is Essential

Modern façade constructions have become increasingly sophisticated due to the growing number of layers and materials within the façade build-up.

The façade cladding plays a crucial role by:

- Protecting the inner construction
- Managing moisture and ventilation
- Improving energy performance
- Increasing durability of the building envelope

This makes proper façade detailing critical.

Incorrectly designed or poorly executed details can negatively affect:

- Service life of the façade
- Ventilation performance
- Moisture management
- Structural behavior
- Adhesive durability

Even the best adhesive system cannot compensate for poor detailing.

Why Professional Installation Matters

Like every advanced installation technique, bonded façade systems require:

- Technical knowledge
- Accuracy
- Skilled workmanship
- Correct application procedures

A professional result depends not only on the installer, but also on the technical support provided by the supplier.

At TWEHA®, we actively support façade professionals with:

- Clear installation manuals
- Technical documentation
- Practical application guidance
- Design support
- On-site expertise when required

This helps ensure safe and reliable façade bonding under real-world conditions.

Why Reliable Bonding Systems Make the Difference

There is a major difference between:

- Simply buying a generic adhesive product “off the shelf”
- Working with a fully engineered TWEHA® bonding system

TWEHA® bonding systems are developed specifically for professional façade applications and supported by extensive testing and technical expertise.

With TWEHA®, façade professionals’ benefit from:

- More than 300 tested and approved substrates
- Proven long-term adhesion performance
- Extensive durability testing under extreme conditions
- Technical support during the design phase
- Professional implementation guidance
- Certified and reliable bonding technologies

This level of engineering and support dramatically reduces project risks and increases long-term façade reliability.

Why Do Façade Corners Sometimes Come Loose?

When failures occur at façade panel corners, the cause is usually a combination of:

- Incorrect material choices
- Poor detailing
- Inadequate façade design
- Stress differences within the panel

Conditions at the front and backside of a façade panel can differ significantly due to:

- Temperature variations
- Moisture differences
- Ventilation conditions inside the cavity

These differences create internal stresses within the façade panel itself.

Over time, this may cause the panel to deform or warp permanently.

This deformation is usually most visible at the corners of the panel, where high peeling forces develop on the adhesive connection.

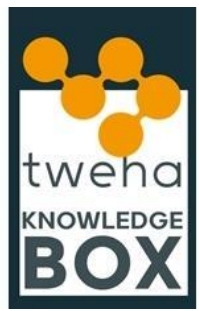
Eventually, these peeling stresses may exceed the strength of one of the bonded materials, leading to localized failure.

Engineering the Complete Façade System

Successful bonded façade construction is never only about the adhesive.

Long-term performance depends on the correct combination of:

- Material selection
- Façade detailing
- Ventilation design
- Professional installation
- Certified bonding systems
- Technical expertise



At TWEHA®, we approach façade bonding as a complete engineered system — not simply as an adhesive product.

TWEHA®: Reliable Bonding Through Expertise

With years of international façade consultancy experience and advanced bonding technologies, TWEHA® supports architects, engineers, contractors, and façade specialists in creating safe, durable, and future-proof bonded façade systems.

Our commitment to technical support, testing, and education helps prevent failures before they occur.

Because in professional façade bonding:

Long-term reliability starts with knowledge, detailing, and the right system choice.

Would you like to know more about bonded façade technology, façade detailing, or approved TWEHA® bonding systems?

Our specialists are ready to support your next project with reliable expertise and high-performance bonding solutions.

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