

WHY SCREW WHEN YOU CAN USE AN ADHESIVE?

The Smart Advantages of Bonded Façade Cladding Systems

In modern façade construction, more architects, engineers, and contractors are moving away from traditional mechanical fixing methods and embracing advanced bonded cladding systems.

A question we are frequently asked is:

“What are the real advantages of adhesive bonding compared to screws, rivets, or welding?”

The answer is simple: bonded façade systems offer major advantages in terms of aesthetics, durability, flexibility, efficiency, and long-term performance.

Better Stress Distribution

One of the biggest advantages of adhesive bonding is the way forces are distributed across the façade panel.

Unlike screws, rivets, or welds — which concentrate loads at specific fixing points — adhesive systems distribute stress evenly over the entire bonded surface.

This results in:

- Reduced point-loading
- Lower stress concentrations
- Improved structural behavior
- Greater long-term durability
- Reduced risk of cracking or deformation

Especially in ventilated façade systems exposed to wind loads and thermal movement, this even stress distribution is a major advantage.

No Damage to the Façade Material

Mechanical fixing methods such as:

- Drilling
- Screwing
- Riveting
- Welding

all create local deformations and stresses within the façade material.

These interventions may weaken the integrity of the substrate and create vulnerable points within the façade system.

Bonded cladding systems, by contrast:

- Do not damage the panel surface
- Preserve the integrity of the substrate
- Avoid stress concentrations around fixing points
- Maintain the structural quality of the façade material

This is particularly important for sensitive or brittle façade materials such as ceramics and natural stone.

Excellent Flexibility During Thermal Movement

Modern façade constructions are constantly exposed to:

- Temperature fluctuations
- Expansion and contraction
- Wind-induced movement
- Structural vibrations

Advanced TWEHA® bonding systems remain permanently elastic and can absorb significant movements between façade panels and supporting structures.

Adhesive bonding can therefore easily compensate for differences in thermal expansion coefficients between various materials — something rigid mechanical fixings struggle to accommodate.

Longer Lifespan and Better Vibration Resistance

Compared to traditional joining methods, adhesive systems offer superior resistance against:

- Vibrations
- Fatigue
- Dynamic movement
- Environmental influences

Because bonded connections absorb forces more evenly and flexibly, they generally achieve a longer service life than many mechanical fixing systems.

In addition, bonded systems significantly reduce noise vibrations within façade constructions.

Faster Installation = Lower Costs

Bonding façade cladding is often considerably faster than:

- Drilling
- Welding
- Riveting
- Mechanical fastening

This creates substantial advantages on-site, including:

- Faster installation times
- Reduced labor costs
- Increased efficiency
- Lower overall project costs

Simplified installation procedures also reduce the risk of execution errors and improve project continuity.

No Pretreatment Required with TWEHA®

Another major advantage of TWEHA® bonding systems is their ease of application.

For many approved substrates, no complex pretreatment methods are required.

This allows façade professionals to work:

- Faster
- More efficiently
- More safely
- With greater installation reliability

Combined with our extensive substrate testing and technical support, TWEHA® systems offer a highly practical solution for modern façade construction.

Thinner and Lighter Natural Stone Panels

In bonded façade systems, stress transfer works differently than with mechanical fixings. Because the adhesive distributes stress evenly across the bonded surface, thinner façade panels can often be used safely.

This is especially advantageous for natural stone applications.

Benefits include:

- Reduced material thickness
- Lower panel weight
- Easier handling on-site
- Lower transport costs
- More sustainable material usage

Lightweight façade systems are increasingly important in modern architecture and high-rise construction.

Cleaner and More Elegant Aesthetics

One of the most visible advantages of bonded cladding systems is the clean architectural appearance.

Unlike visible screws or rivets, adhesive bonding creates:

- Invisible fixings
- Smooth façade surfaces
- Minimalist architectural lines
- High-end visual quality

This allows architects greater design freedom and supports modern contemporary façade aesthetics.

The Future of Façade Construction

As façade systems continue evolving toward lighter, more sustainable, and more aesthetically refined solutions, bonded façade technology is rapidly becoming the preferred choice worldwide.

With TWEHA® bonding systems, façade professionals' benefit from:

- Advanced adhesion technology
- Long-term durability
- Improved flexibility
- Faster installation
- Better aesthetics
- Reduced structural stress
- Proven façade expertise

TWEHA®: Bonding Technology for Modern Architecture

At TWEHA®, we combine advanced adhesive technologies with years of international façade consultancy experience to support architects, engineers, and contractors in creating safe, durable, and future-proof façade systems.

Because in modern façade construction, the question becomes increasingly clear:

Why screw when you can bond?

Would you like to know more about bonded façade systems or TWEHA® adhesive technologies?

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

TWEHA®, 2026