VOC EMISSIONS

Why Solvent-Free Adhesives Are the Future of Sustainable Façade Construction

One of the most frequently used terms in the adhesive and coatings industry today is:

VOC

Terms such as *low-VOC*, *reduced-VOC*, and *VOC-free* appear everywhere in modern construction specifications.

While many professionals know that VOC stands for **Volatile Organic Compounds**, far fewer fully understand what VOCs are — and why they receive so much global attention.

As sustainability, indoor air quality, and environmental regulations become increasingly important, VOC emissions are now a major consideration in modern façade and construction projects.

What Are VOCs?

Volatile Organic Compounds (VOCs) are chemical substances that easily evaporate into the air at room temperature.

In many traditional adhesive systems, solvents are used to support application and processing. Once the adhesive has performed its function, these solvents evaporate into the atmosphere and become VOC emissions.

VOC-containing substances can be found in products such as:

- Adhesives and sealants
- Paints and paint strippers
- Carpets and flooring materials
- Wood preservatives
- Furniture made from wood derivatives
- Polyurethane and polystyrene insulation products

Many of these products continue releasing VOC emissions into indoor environments for months — and sometimes even years after installation.

Environmental Impact of VOC Emissions

VOC emissions are not only an indoor air quality issue — they also contribute significantly to environmental pollution.

When VOCs react with:

- Nitrogen oxides
- Heat
- Sunlight

They form ground-level ozone layers, one of the main components of smog.

This contributes to:

- Air pollution
- Reduced air quality
- Environmental degradation
- Negative effects on human health and ecosystems

For this reason, governments and environmental agencies worldwide continue developing stricter regulations aimed at reducing VOC emissions in construction products.

VOCs and Indoor Health Risks

In addition to environmental concerns, VOC emissions can also negatively affect indoor climate quality in both residential and commercial buildings.

Poor indoor air quality caused by VOCs may contribute to:

- Respiratory irritation
- Headaches and discomfort
- Allergic reactions
- Reduced workplace comfort
- Long-term health concerns

As awareness around healthy buildings increases, architects, developers, and building owners are placing greater emphasis on selecting low-emission and solvent-free construction materials.

TWEHA® Adhesives: Completely Solvent-Free

At TWEHA®, sustainability and safety are central to product development.

Our advanced bonding systems are:

- Completely solvent-free
- Non-VOC
- Free from harmful solvent emissions

Because TWEHA® adhesives contain no solvents, they release: zero VOC Emissions (0 µg/m3)

This contributes directly to:

- Healthier indoor environments
- Improved air quality
- Reduced environmental impact
- Safer processing conditions
- Compliance with modern sustainability requirements

Supporting Sustainable and Future-Proof Construction

Modern façade projects increasingly require products that support:

- Sustainable building certifications
- Healthy indoor environments
- Low-emission construction methods
- Environmental responsibility
- Circular building concepts

TWEHA® bonding systems align perfectly with these modern construction demands while maintaining the highest standards for adhesion performance, durability, and long-term façade reliability.

Better for People, better for the Environment

Choosing solvent-free bonding systems is no longer only about environmental compliance — it is about creating healthier, safer, and more future-proof buildings.

With TWEHA® adhesives, façade professionals' benefit from:

- Advanced bonding performance
- Zero VOC emissions
- Improved worker safety
- Sustainable façade solutions
- Long-term durability
- Cleaner and safer application conditions

TWEHA®: Sustainable Bonding Technology for Modern Construction

At TWEHA®, we believe high-performance bonding systems should never compromise environmental responsibility or human health.

By combining advanced polymer technology with solvent-free formulations, we continue supporting the transition toward cleaner, safer, and more sustainable façade construction worldwide.

Would you like to know more about solvent-free bonding technologies or sustainable façade solutions?

Our specialists are ready to support your next project with innovative, high-performance, and environmentally responsible bonding systems.

TWEHA®, 2026