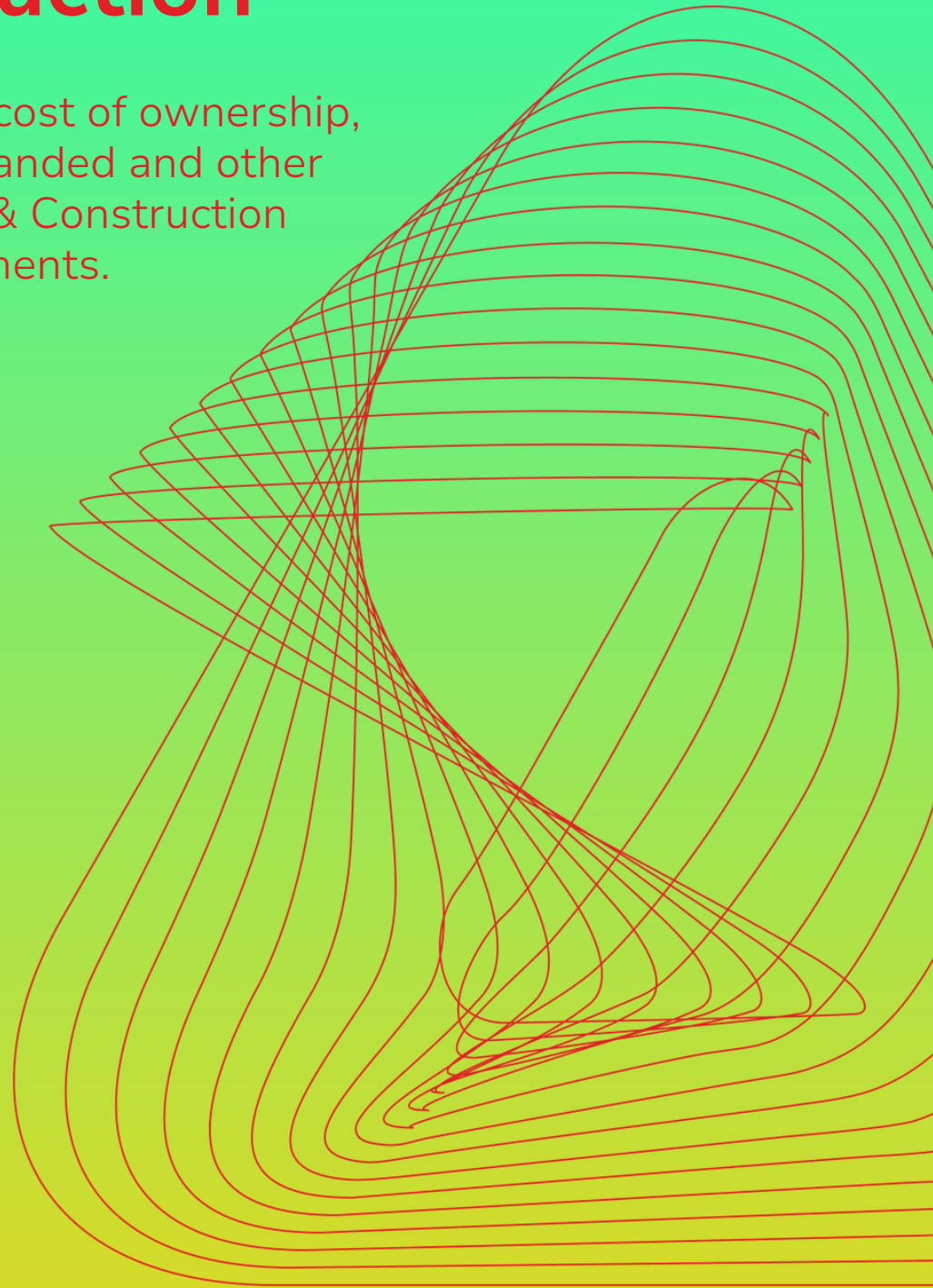


The Future of Building & Construction

– decreasing total cost of ownership, lower skillset demanded and other trends in Building & Construction (B&C) market segments.



INTRODUCTION

Today's extensive range of Avery Dennison pressure-sensitive tapes for industrial applications offers solutions for the B&C of tomorrow. This trend study looks at current challenges and opportunities in the industry, including shortage of skilled labor, standardization in bonding methods and the potential decrease of total cost of ownerships – before discussing how our performance tapes can be the glue that holds it all together.



Shortage of skilled labor

Let's start with the big one. Material shortages in the B&C sector are slowly but surely decreasing throughout the EU, but labor scarcity remains a challenge. In fact, shortages in skilled labor have been long-term issue #1 in the industry – even prior to the pandemic, the energy crisis and the current geopolitical climate. So much so, that services inflation is expected to be more persistent than goods inflation in the foreseeable future, according to a statement at the Euroconstruct conference last June. Availability problems of skilled labor are most dominant in Germany, France and Austria. With employment rates running historically low in many countries, construction projects throughout the EU suffer delays.

Total cost of ownership

Due to economic pressures in the industry, working with tight budgets is common, particularly for less demanding applications. As a result, there is a growing demand for lower-cost solutions. The amount of product launches into the B&C industry segment has generated price pressure across the value chain, ultimately leading to margin erosion. Tapes – in general – are an efficient way of providing added value. Adding a mounting or bonding solution to a product as a manufacturer, unburdens the next player in the value chain by saving time in the application or execution. While self-adhesive products are more expensive compared to non-self-adhesive products, the total applicator's cost of ownership for the product goes down as a result of choosing a time saving bonding method. On top of that, the expertise needed to select, purchase and handle the bonding method and check compatibility with the building materials needs to be accounted for as well. If producers integrate and verify this research into their materials, a certain standardization starts to manifest which could prove hugely beneficial.

Choosing the right path

Adjusting the approach can help offset issues across various market segments. It is crucial to choose the optimal adhesives for construction projects, as they play a vital role in ensuring durable, secure, and dependable structures. The choice of material can significantly improve efficiency because with shorter installation times and less skills required, contractors can achieve more installations of m² per day.

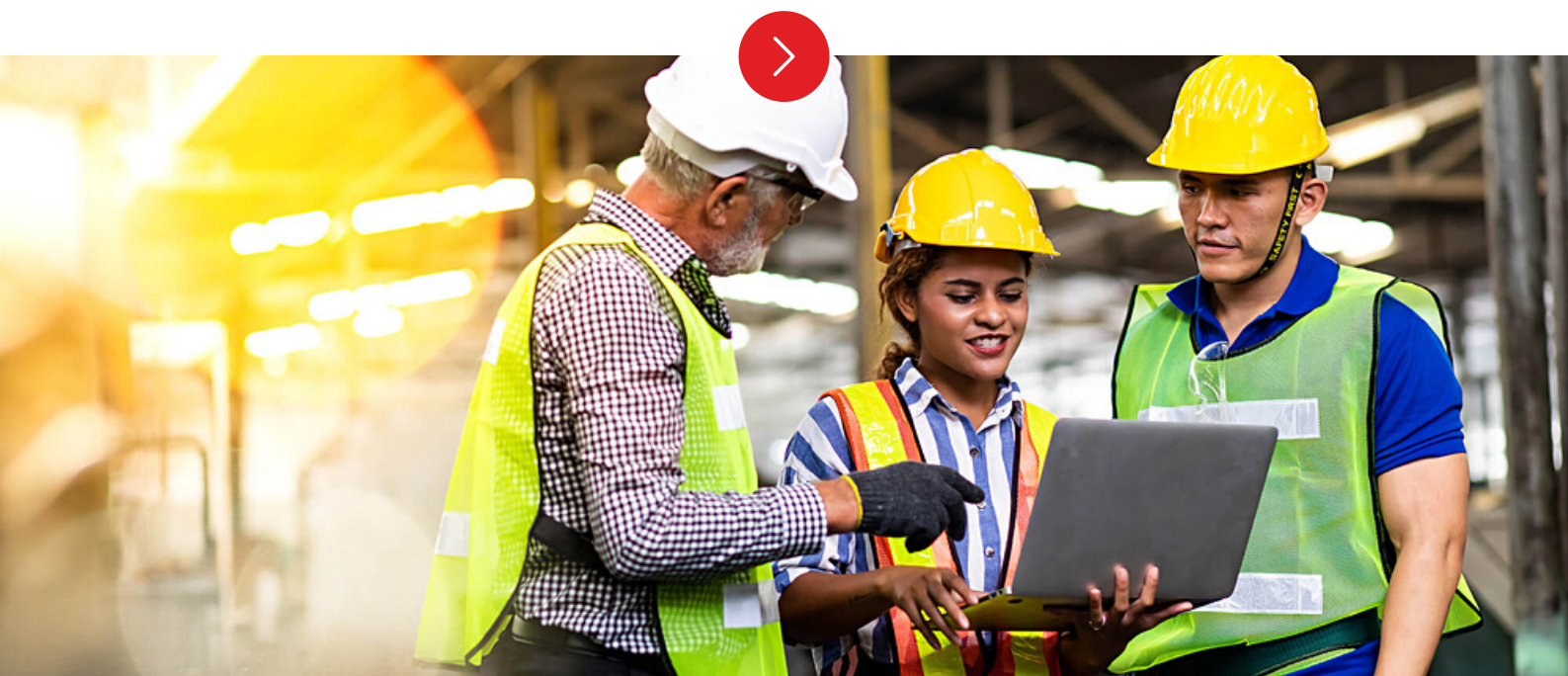
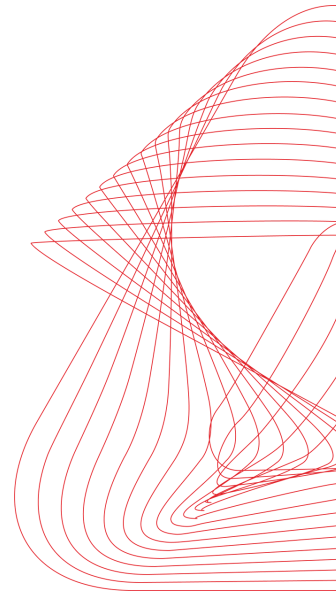
Tackling shortage of skilled labor

Simplified installation can be a crucial advantage for contractors and installers facing shortages in B&C areas like flooring, ceiling and walls, and windows and doors. Not only does it significantly reduce the cost, but also addresses the scarcity of skilled labor – allowing current and future projects to proceed without delays. With our easy-to-install pressure-sensitive adhesive (PSA) solutions, you can assign workers with moderate training and experience to an increasing variety of installation tasks.

This reduces the need for highly skilled workers and eliminates the need for additional tools.

Unlike glue-down flooring which can take 48 hours to completely cure, PSAs are set by pressure and require no cure time. Professional contractors can return commercial spaces to service right away—a big plus for facilities like hospitals that cannot afford downtime.

This also allows contractors to schedule and complete more jobs in a shorter period.





Ease of use, time-saving, waste-avoiding

From DIY installers and professional contractors to manufacturers and distributors, the irrefutable advantages of tape solutions are catching on. It's not hard to see why. The easily tearable peel and stick approach, installed simply by adding pressure and without the use of tools, is completely unique to tapes. Avoiding costly wait times with immediately walkable floors and the obvious recyclability benefits are a nice – and important – upside. Specific skills and tool sets are redundant, cure time is reduced to zero and installation has become easier. In other words, advantages in production are numerous and in summary include:

- Ease of installation
- No cure time: peel and stick (fast, clean and versatile)
- Aesthetically pleasing (no drilling holes)
- No additional process costs
- Low waste



Standardization and increased efficiency

The standardization of PSAs within B&C market segments, which involves the development and promotion of technologies and applications based on standards, can yield significant advantages in terms of efficiency and productivity. Applying PSA solutions allow for a constant adhesive thickness or adhesive mass on the whole bonding surface. This results in a perfect weight distribution and constancy in application. Therefore, using tape solutions is a good start to design bonding processes into certified applications. Manual application of liquid adhesive is hard to certify as the amount of applied liquid adhesive is hard to measure and is hugely affected by the human factor. Tape solutions on the other hand offer both permanent and temporary bonding options for a wide range of materials, subfloors, and underlayment. These solutions are compatible with various surfaces such as PVC, vinyl, rubber, cement, and wooden subflooring. Moreover, cleanly removable solutions are a key element to consider in the afterlife of flooring and subfloor. Both in application as well as in terms of storage, tapes have the upperhand when it comes to aging. Any liquid adhesive solution in stock will have to be put to use within the year, whereas tape will remain ready for application for much longer than that. Two years is the standard, but shelf life of five is hardly unusual.

Example: assisting airtightness in building envelopes

A building envelope is the physical separator between the conditioned and unconditioned environment of a building, including the resistance to air, water, heat, light and noise transfer. The application of membranes to structures, including roofs and walls, is significantly improved by building envelope adhesives. These adhesives and membranes play a critical role in sealing the envelope, preventing the infiltration of air and water. Used in various applications such as bonding insulation materials and securing window films, they allow for a strong mechanical anchorage. In many cases, the bond strength is not generated immediately, but slowly builds up in the 12 to 24 hours after application. The application of building materials with an integrated bonding solution is less affected by this problem. There are numerous high-performance solutions available, designed for building envelopes, that offer unparalleled durability and resistance against the elements ensuring lasting structural integrity.

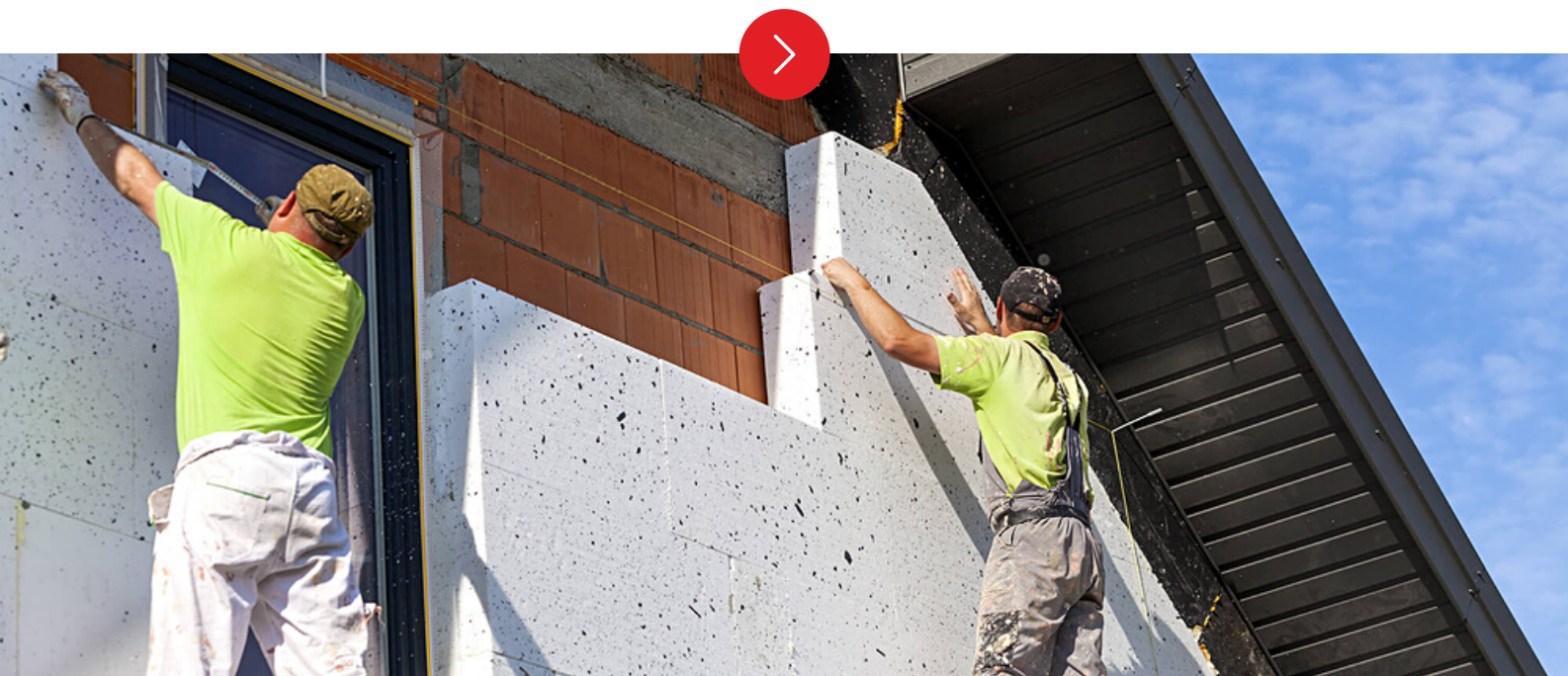
The practical benefits of tapes

B&C, an industry full of challenges, is about practicalities that can make the process more efficient and more precise. PSA tape solutions offer demonstrable improvements for a wide range of applications like thermal insulation, sound absorption and protection. The ability to easily remove PSA tapes offers significant advantages, particularly when compared to generic liquid adhesive solutions. Whether something is temporarily or permanently mounted, PSA tapes can be removed without leaving any residue. Furthermore, PSA tapes can be cleanly separated and isolated for recycling purposes. In contrast, once liquid adhesive is cured, it becomes non-removable. PSA tapes provide a clean removal process and can be sorted into different waste streams.

Second, bonding is a process largely depending on environmental conditions. Tapes allow a lot of flexibility there as well. You can laminate in place A – under optimal conditions – and mount in place B, where you may not have the right conditions, machinery or space for the first step. The peel and stick properties of our performance tapes allow for an immediate bond which reduces time spent on ladders, lifts, aerial platforms or in any other balancing act.

Example: superior performance in ceilings & walls

Tapes allow for a temporary bonding solution. They can have sufficient holding power to keep certain substrates in place that also need a mechanical anchorage. In that way, you can align the substrate in its correct place or position by using the tape, then apply the mechanical anchoring afterwards. This two-step process saves time and relies less on a specific skill set. Mounting tapes bond to a range of materials, including low surface energy substrates and textured surfaces. They are also resistant to plasticizers, temperature extremes, chemicals, water and UV light. Applied pressure to the bond is what builds up most of the adhesive strength, not time. The specifications of the adhesive determine its compatibility with moist substrates, as well as humid, hot, or cold environments.





Avery Dennison Performance Tape Solutions

Avery Dennison Performance Tapes offers the solution in the B&C market where the equation of cost/performance is getting more important every day. First and foremost, we offer products with targeted solutions that also fulfill profitability expectations. These solutions bring additional added value to B&C industry segments with a complete portfolio of products and expertise.

We recognize that the right adhesives contribute to structural integrity and stability, allowing commercial construction projects to withstand the test of time. With innovative adhesive solutions designed with environmental resilience in mind, we help projects endure harsh conditions while maintaining a clean and seamless finish. The goal is to prioritize energy efficiency by offering adhesives that improve insulation, resulting in long-term cost reduction. By combining world-class expertise with a drive for innovation, offering exceptional pressure-sensitive adhesives and tapes in B&C. We lead the construction industry with comprehensive adhesive solutions that enhance both structural integrity and aesthetic appeal. With 50 years of experience, we offer adhesive solutions in a wide range of B&C market segments across the globe.

As your trusted partner, we take pride in our commitment to the safety and the success of your construction projects. Our cutting-edge adhesive solutions come with both technical and customer service, which will help to elevate your projects to new heights. More importantly, that portfolio is supported by our R&D labs – including in-house testing and evaluation – as well as our expertise in on-site application and technical sales support.

Please refer to Tapes. AveryDennison.com for complete terms and conditions, including warranty terms, relating to this product. You should periodically review the site as terms and conditions are subject to change without notice.

The information contained herein is believed to be reliable but Avery Dennison makes no representations concerning the accuracy or correctness of the data. This product, like any other, should be tested by the customer/user thoroughly using end user conditions to ensure the product meets the particular requirements. Independent results may vary.

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**For more information on our bonding tapes and adhesive solutions,
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