



September 2025 | White Paper

TYPAR® TOUGH—THE TRUTH BEHIND THE TYPAR MICROPOROUS BREATHABLE COATING



Figure 1. TYPAR Commercial in use on a multi-family building.



TYPAR® Tough—The Truth Behind the TYPAR Microporous Breathable Coating

Introduction—A Historical Perspective

Invented in the 1980s, TYPAR was first used as a geotextile and landscape fabric. Its spunbond polypropylene-based filament fibers made the perfect product for those applications requiring ultra durability and strength. Then in 2002, the TYPAR known today—a spunbond polypropylene fabric coupled with a breathable microporous coating—was invented, and with that the advent of a new, best-in-class building wrap was born. However, like all David vs. Goliath stories, competition has tried to poke holes (literally) into TYPAR building wraps. From makeshift YouTube videos to live side-by-side water bottle demonstrations, we have witnessed all types of attempts to showcase TYPAR leaking like a sieve. This white paper will settle the age-old debate: Is TYPAR's special coating resistant to damage?

How is TYPAR Manufactured?

To start, thousands of extremely fine, continuous polypropylene fibers are extruded at the TYPAR Old Hickory facility outside Nashville, Tennessee. That's why we can proudly boast that TYPAR is made with "Old Hickory Pride." After fiber extrusion, these fine and extremely tough filaments are laid down to produce a continuous fiber sheet, which is then mechanically and thermally bonded to produce the base nonwoven substrate, or in layman's terms, raw uncoated TYPAR building wrap. From there, that base substrate is shipped 30 minutes up the road to a sister Nashville facility, where a patented microporous breathable coating is applied over the uncoated TYPAR wrap. It's at this point when TYPAR truly becomes the TYPAR that builders, developers, architects, framers, and installers know as the strongest and most durable building wrap in the industry.

More About TYPAR's Patented Breathable Coating

TYPAR manufactures six weather-resistant barriers as part of its industry leading lineup of weatherization products—TYPAR® BuildingWrap™, TYPAR® Commercial (previously TYPAR® MetroWrap™), TYPAR® Drainable™ Commercial, TYPAR® DrainableWrap™, IronClad™ by TYPAR® and our first self-adhered product, TYPAR® DrainableWrap™ Peel and Stick. Each of these products has their own product attributes, specifically created in response to market needs, and TYPAR is able to adjust and specially formulate each product's breathable coating accordingly. For example, TYPAR Commercial—our first commercial-grade building wrap—is comprised of a 2.5 oz nonwoven base that is reinforced with a heavy-duty breathable coating that includes special UV additives which allow up to an industry-leading 12-month UV exposure. Adjustments to coating thickness, coupled with inclusion of various additive packages, allows TYPAR to specifically formulate a lineup of building wraps that can meet the most stringent of current and future building codes. All of this is accomplished while still preserving the elements that make TYPAR so unique—tear and tensile strengths that are 5X that of the leading competitors, permeability targets in the 10-20 perm "sweet zone," surfactant resistance, and exceptional UV performance.

Figure 2. TYVEK WRB results. Grooves did appear within all four test areas, revealing damage to the outer layers.

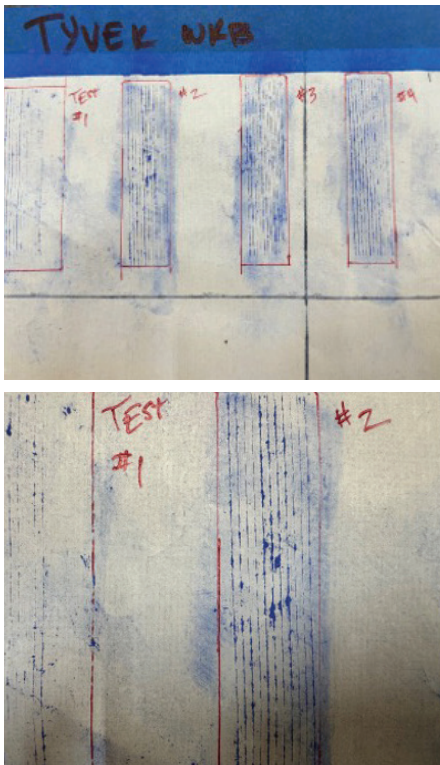
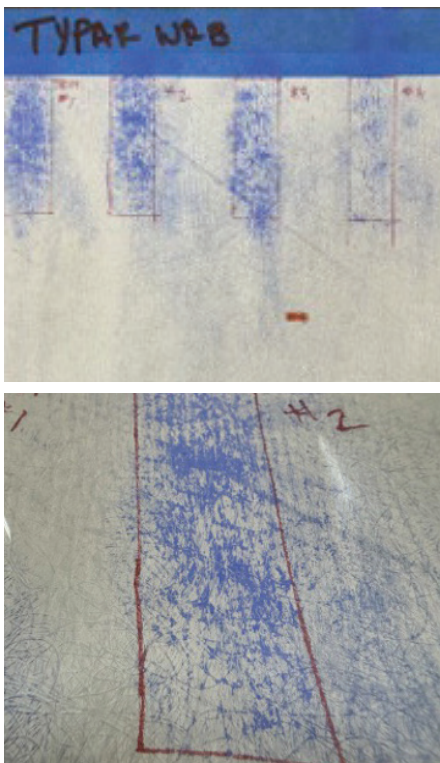


Figure 3. TYPAR WRB results. No visible damage to the WRB was observed.



The #1 Claim against TYPAR®—You can Poke Holes in It (Literally)

The biggest claim competitors make against TYPAR and its performance is that its coating can be easily damaged in the field. The argument goes on to state that once a film break occurs in the coating, all of TYPAR's claimed physical properties are impacted and ultimately the product becomes susceptible to bulk air and water intrusion. The videos on YouTube or in a makeshift garage show keys, a knife, or box cutter being utilized to damage the microporous breathable coating. Another video features a stream of water being applied against that same damaged TYPAR wrap, and then shows the wrap leaking at the points where the coating is voided. The outcome is really no different than if a piece of Tyvek® was ripped or if the woven scrim was broken on a perforated woven housewrap. Videos and pictures can be manipulated to show any desired outcome. The larger, more pressing question that should be asked as it relates to TYPAR® coating durability is just how much force or pressure is needed to be applied to damage TYPAR's coating, and is that indicative of what would be observed on a typical jobsite?

Debunking the Claims: Third-Party Testing Results Show TYPAR's Coating Withstands Even the Toughest Jobsite Conditions

TYPAR completed third-party testing exploring "scratch resistance" across two leading WRBs in the industry, TYPAR and Tyvek. Conducted in June 2024 by an accredited third-party testing facility, with ISO 17025, Miami-Dade, AAMA, and AABA certifications, the testing compared TYPAR® BuildingWrap™ to Tyvek® HomeWrap® weather-resistive barriers when subjected to a common scratch test.

- Four (4) cut samples of each WRB were subjected to a hundred cell knife, with a weighted handle, to ensure accurate pressure was applied to each sample. A 2 mil 11 blade was attached to the handle, and the blade was then applied to the samples and dragged in a downward motion.
- These products were tested in a controlled environment; neither material had been subjected to UV or any other outdoor weather events. Both products were new and freshly cut from the roll, cut to the same dimensions, and tested at the same time. The two products were tested as a comparison to one another and were rated on a scale of 0 to 5—0 being the lowest performing score and 5 being the highest performing score for scratch resistance.
- After specimens of each WRB were prepped, four (4) rectangles were marked on the specimen with a red marker. Within the rectangle, 11 scores were made using the cell knife. Each of the four (4) tests had the same pressure applied. The cell knife was dragged in a downward motion, approximately two (2) inches in length.
- Score marks were not visible on the TYPAR BuildingWrap, however they were apparent on samples of Tyvek. Blue chalk was applied to each test location to highlight scratch damage and resistance of Tyvek and TYPAR, respectively.

Results & Observations

Scoring: 0= lowest scratch-resistance, 5=highest scratch-resistance

| TYVEK | TEST #1 | TEST #2 | TEST #3 | TEST #4 |
|-------|---------|---------|---------|---------|
| Score | 1 | 1 | 1 | 1 |
| TYPAR | TEST #1 | TEST #2 | TEST #3 | TEST #4 |
| Score | 5 | 5 | 5 | 5 |

Figure 4. A contractor installs TYPAR® DrainableWrap™ in a residential setting.



Closing Thoughts on TYPAR's Microporous Coating

As evidenced in the third-party testing, TYPAR® outperformed Tyvek® in terms of scratch-resistance. This should come as no surprise when the chemistry of both products is compared—polypropylene (TYPAR's base substrate) is inherently stronger than polyethylene (Tyvek's substrate) as proven by TYPAR's superior tear and tensile strengths. Polyethylene (PE)-based products lend themselves to naturally more permeable products where polypropylene (PP)-based products are better suited for those applications designed for strength and durability. And if you compare the basis weight of TYPAR® BuildingWrap™ (3.024 oz/yd²) to Tyvek (1.8 oz/yd²) this is only further exacerbated. In other words, TYPAR has an additional 1.2 oz/yd² vs. Tyvek, which simply means all else equal, additional pressure is going to be required to damage TYPAR's advanced coating.

Now this begs another question. Are the results highlighted here representative of true jobsite conditions? After all, many times internal or external lab testing is not always representative of what is evidenced in the field. So how do we reconcile? The hundred cell knife utilized in this third-party testing closely mimics the instruments one might see on a jobsite, specifically a razor blade, box cutter, or utility knife, which are primarily used for opening boxes, cutting materials to specified lengths/widths, for I-cuts in the WRB before window installations, among other applications. And what about the pressure at which the knife was applied against the WRBs? Whether you are a manufacturer, dealer, or builder, there is one thing that can be agreed upon: building materials are prone to damage. Whether through transit, mishandling of materials or even improper installation, building materials will get damaged on the jobsite—and even TYPAR is not immune to that reality. So yes, TYPAR could rip (though not easily) or its coating could be scratched, but is that really telling us much? If a window is improperly set, will it leak? If only one layer of stucco is applied, will it fail?

While simplistic in nature, these analogies and the long history of building and building practices around the country, reaffirm the obvious... damage to precious building materials is inevitable. In the case of TYPAR, however, we revert back to its design and some inherent building design principles—mainly that two layers are better than one. Third-party testing showed that Tyvek was prone to greater scratch and tear damage via a traditional jobsite cutting blade vs. TYPAR, and as a single-layer system that makes sense. Even if a TYPAR coating is damaged, you still have the protection of thousands of filament polypropylene fibers overlaid onto one another as a second line of defense; with Tyvek, once that polyethylene film layer is broken, it's susceptible to all the elements—bulk water and air being no exception. And finally, let's not forget some "common sense" principles on the jobsite—if TYPAR's coating does get damaged, simply cover it up with one of our premium flashing and tape solutions, including TYPAR® Butyl, TYPAR® All-Temperature, and our latest TYPAR® Clear Acrylic Flashing. Any of those heavy-duty flashings will repair any rips, keep bulk water and air out, and ensure builders and homeowners alike that their home remains covered under TYPAR's leading lifetime limited warranty.

It's critical to consider all factors when viewing makeshift YouTube or water bottle test videos. TYPAR is engineered for performance and its robust product design means it is built to last and withstand even the toughest challenges and weather elements. When you think of TYPAR, think of all those leading attributes—bulk air and water holdout, superior tear and tensile strengths, optimal breathability, surfactant resistance—and now add a new fact to that list: TYPAR's microporous coating does not tear off with everyday jobsite abuse and is resistant to damage.

FOR MORE INFO, VISIT [TYPAR.COM](https://www.typar.com).



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