

# Building a Smarter School

## Team Chooses 3M™ Air and Vapor Barrier 3015NP for South Portland Middle School Success

In November 2019, voters in South Portland, Maine, approved a referendum to build a new middle school. WBRC Architects was there from the beginning, working on site selection as soon as funding was secured. Ultimately, the decision was made to consolidate two middle schools into one new school for fifth through eighth grades.

“It’s 176,000 square feet to serve 900 students,” said WBRC architect Tyler Johnson. “There’s one wing for fifth and sixth grades, another for seventh and eighth grades, and the core of the building is to be used by both, with the gym, cafeteria, and multipurpose space—slated to be open in 2023.”

One wing is four stories, and the rest of the building is three stories, said general contractor Jim Klemarczyk with Harvey Construction.

“We have significant exterior walls and surface area that required covering, and all the flashing around the windows,” Klemarczyk said. “It’s been quite a bit of work.”

Such a large, long-term project required extra care when specifying products to use in construction. Johnson learned about 3M™ Air and Vapor Barrier through a lunch and learn session delivered by a 3M sales representative.

“We thought it was a pretty interesting product,” Johnson said. “It didn’t require any sort of priming on the substrate. It just required the substrate to be clean, and then you could install it.”

Additional product features made 3M™ Air and Vapor Barrier 3015NP Johnson’s first choice for the building envelope. Application temperatures, adhesion, and UV exposure were crucial considerations for everyone on the construction team. Other benefits the product offers have helped the project stay on schedule, added to the team’s satisfaction, and helped them build smarter.



**3M™ Air and Vapor Barrier 3015NP’s low-temperature application capacity was a key attribute that contributed to its selection.**





0° to 150°F

Apply in temps from 0° to 150° F and count on 12-month UV resistance.



## Climate Considerations

Building in Maine comes with its own set of challenges, especially in fall and winter. According to Klemarczyk, 3015NP's low-temperature application capacity was a key attribute that contributed to its selection.

"Being in the Northeast, the low temperature application is huge," Klemarczyk said. "It's something we just have to deal with when using other products. We have to enclose spaces and heat them just to apply it."

Kevin Worth, with Standard Waterproofing based in Winslow, Maine, oversaw the envelope's installation.

"We've had all the kinds of temperatures Maine can throw at us," Worth said. "But we haven't had any issues, from beginning to end."

3M™ Air Barrier Membranes are approved for installation between 0 degrees and 150 degrees Fahrenheit. The extended temperature range prevents delays and additional, potentially costly steps.

"Other products can't get below 40 degrees, and even then, it's a special product, not a standard product," Johnson said. "This product's temperature range allowed the contractor to schedule construction over two years without being restricted by temperature—which saves time and money."

With other products, extreme temperatures can significantly impact adhesion—which leads to the next attribute that sets the 3M products apart.

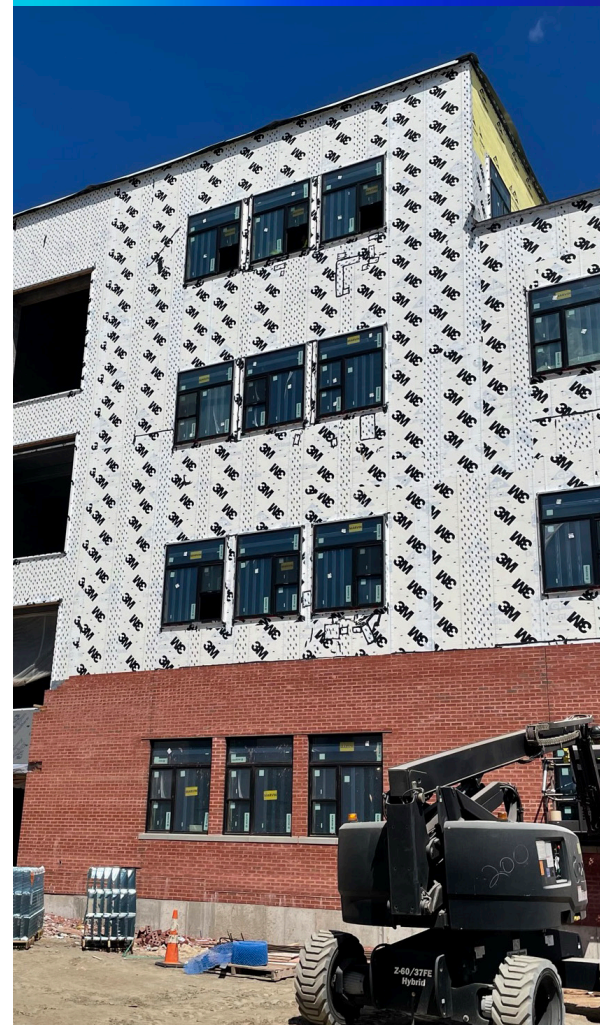


**"Auditors were concerned about not having primer, but after the first inspection, they were impressed with the adhesion."**

- Kevin Worth

**"Other products can't get below 40 degrees. This product's temperature range allowed the contractor to schedule construction over two years without being restricted by temperature."**

- Tyler Johnson







## Performance in Extremes

“The adhesion was the second key attribute in our selection of this product,” Klemarczyk said. “We’ve had no issues with the product peeling off any substrates, providing they’re dry and clean. That’s new for me because it’s been an issue with all other products.”

3M membranes and tapes use 3M acrylic adhesive technology to eliminate the need for primer and stick to more than 50 different kinds of building sealants and construction materials. They’re compatible with synthetic rubber, butyl, polyurethane, silicone, and silane-terminated hybrid sealants, among others.

“We’ve had problems in the past with other products on masonry in cold temperatures when the product loses adhesion. The same thing has happened with exterior fiberglass sheathing,” Klemarczyk said.

Air Barrier Association of America (ABAA) auditors conducted three adhesion tests and quality checks, Worth said.

“Auditors were concerned about not having primer, but after the first inspection, they were impressed with the adhesion,” Worth said. “Everything passed with flying colors at the end.”

## Long-term Exposure

The third differentiator significant to Klemarczyk and Johnson is the Air and Vapor Barrier’s UV rating. Many similar products can only withstand UV exposure for a few months before needing to be replaced. 3M™ Air and Vapor Barrier 3015NP is formulated to withstand up to 12 months of UV exposure.

“Because it was so big and such a long-term project, there are a lot of areas that were likely to be exposed for a long time, and we didn’t have to worry about UV issues,” Johnson said.

“The UV exposure rating for 12 months is a lifesaver,” Klemarczyk said. When working with products with shorter windows—like 90 days—he’s had to reapply, he said. Between supply chain issues and labor shortages, having a full year makes all the difference. The extra cushion saves both stress and money.



**“The UV  
exposure rating  
for 12 months is  
a lifesaver.”**

- Jim Klemarczyk



# Additional Benefits

## Weight

3M™ Air and Vapor Barrier 3015NP is a lightweight product compared to others. This helps increase the speed of installation and means less physical strain for installers. Worth shared, “Our guys can easily throw 15 or 20 rolls of material in the truck, and you don’t need all this primer.”

## Speed

Without requiring primer, installing 3M™ Air and Vapor Barrier 3015NP is fast. “You’re skipping a whole step in the process,” said Worth. “You don’t have to apply adhesive, which is huge.”

## Transparency

The product is slightly translucent, which helps speed up construction. “The metal panel installers like it because they can align their furring strips with the studs,” Johnson said. “They don’t have to guess where the studs are. They can see through the product.”

## Flexibility

With the option to install the product either vertically or horizontally, installers can select what’s right for each project.

## Durability

While thin and lightweight, 3M™ Air and Vapor Barrier 3015NP is long-lasting. And inevitable small tears are not a problem. “It’s so quick and easy to fix,” Worth said. “You don’t need to lug multiple pieces around.”

## Flashing

3M has a full line of flashing accessories designed for multidirectional applications. Johnson said he specified 3M flashing tape into the job as well.

As the team works to complete the community’s new middle school, they’re anticipating future projects with 3M™ Air and Vapor Barrier 3015NP.

“I’d love to use it in the future and will recommend it to anybody,” said Klemarczyk.

“We already have projects on the books that we’re going to use this for,” said Worth.

Johnson said he’s been seeing the familiar 3M logo on more and more construction sites around Maine, and he understands why.

“I’m using the 3M product as my basis of design going forward,” said Johnson.

3M™ Air and Vapor Barrier 3015NP



Industrial Adhesives and Tapes Division  
3M Center, Building 225-3S-06  
St. Paul, MN 55144 USA

Phone 1-866-513-4026

Web [3M.com/airbarrier](https://3M.com/airbarrier)

Warranty and Limited Remedy: 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS, INCLUDING ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement or repair of the 3M product or refund of the purchase price. Limitation of Liability: Except for the limited remedy above, and except to the extent prohibited by applicable law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential, regardless of the legal or equitable theory asserted.

3M is a trademark of 3M Company. © 3M 2023. All rights reserved.