

Benefits of Post-Applied Water Repellent



The use of a post-applied water repellent is part of an overall strategy to comply with Code requirements for weather protection by providing excellent resistance to moisture penetration. A sound moisture strategy also includes following these additional recommendations:

First, the concrete masonry units and mortar should include integral water repellent. Second, flashing and weeps should be placed above any interruption of the vertical drainage cores in the wall to assure that the wall drains properly. Third, this drainage system is optimized by using CPG's WCT (which stands for "water control technology") products, which continually directs water downward in the cores in the wall so that the water drops and exits the wall via the flashing and weep system.

Why a Post-Applied Water Repellent?

The use of integral water repellent in the block and mortar drastically reduces the water that can enter the wall via the block and mortar joints. However, adding a post-applied water repellent provides even greater protection against moisture penetration. Here's why: the integral water repellent in the block and mortar does not prevent moisture entering through hairline cracks or small voids in the wall. These voids may be caused by unanticipated settlement cracks, small voids in the mortar, or movement cracks above openings. A clear, colorless, breathable post-applied water repellent can bridge such small voids.

As an added benefit, post-applied water repellents also help to keep the wall clean by reducing the volume of dirt and airborne pollutants that can build up on the wall surface. The water repellent should be applied using the manufacturer's instructions. Take note of the recommended coverage rate for concrete masonry, which typically may vary between concrete masonry and clay brick. If the proper amount of sealer isn't applied, the performance and life expectancy of the sealer will be compromised. We suggest measuring off a 100 sq. foot section to verify proper application rates as part of the sample process.

QUICK POINTS

- We recommend the use of a clear, colorless, breathable penetrating water repellent sealant as part of a comprehensive moisture control strategy using WCT units and flashing and weeps.
- The integral water repellent in the block and mortar addresses most moisture penetration; the post-applied sealant helps with if there are any small voids in the wall.
- Application of the sealant should be demonstrated and accepted on the sample panel prior to application on the main walls.

When to Apply

It is important not to apply a sealer until the walls have been cleaned, allowed to dry, and the cleaning results have been approved. If water repellents are applied onto walls with significant stains, the stains will still be visible after the coating has been applied.

It is difficult to go back and re-clean sealed masonry as the sealer must be stripped off the wall first, a difficult task to accomplish without damaging the masonry.

Demonstrate Sealants on the Sample Panel First

The jobsite sample panel is an easy and effective tool to avoid this problem. The application of the water repellent should be done after the panel segment has been cleaned and the cleaning method approved.

Following this sequence prior to wall construction allows the sample panel to demonstrate, and be the basis for approval of, how the wall will look after application.

As with cleaning methods, it is a bad idea to apply any material to the entire wall without testing it first on a test wall section to make sure the application will be approved and not have any detrimental effects on the wall.

For example, if for some reason the use of an inappropriate sealer causes unwanted changes in the color of the test section after application, it is a lot better to catch that on the sample panel than to have to figure out how to fix the color of the whole building. Clear, colorless sealers are readily available to avoid this problem.

Specification Considerations

We recommend that you use a colorless, non-staining, non-yellowing, breathable, and penetrating water repellent to be applied to the surface of the concrete masonry walls after they have been cleaned and accepted. The water repellent should be capable of performing over hairline cracks and small voids less than 1/16".

Our Concrete Product Group locations may inventory different water repellents. Contact the CPG manufacturer supplying the project for the water-repellent they recommend in their region of the country.

Conclusion

Single Wythe walls are extremely cost-effective compared to other systems. Adding a high quality post applied water repellent provides a layer of redundancy to protect the wall and does not add significant cost to structural single wythe masonry buildings.



Questions?

For more information, visit concreteproductsgroup.com or email your questions to info@concreteproductsgroup.com