

2229 M Street NE

April 15, 2025

Exterior Insulation Finish System vs. 3 Coat Stucco Finish

Based on the following criteria, we believe Exterior Insulation Finish System (EIFS) is superior product for this development over the 3-coat stucco system that was approved in the PUD.

Reduced Structural Load: EIFS is much lighter, weighing approximately 80% less than traditional stucco, which can reduce structural load and potentially lower construction costs.

Moister Control: EIFS offers enhanced moisture control and protection, thanks to its multiple layers, including a water-resistive barrier and insulation board. This system is more flexible and resistant to cracking, making it a durable choice for exterior cladding.

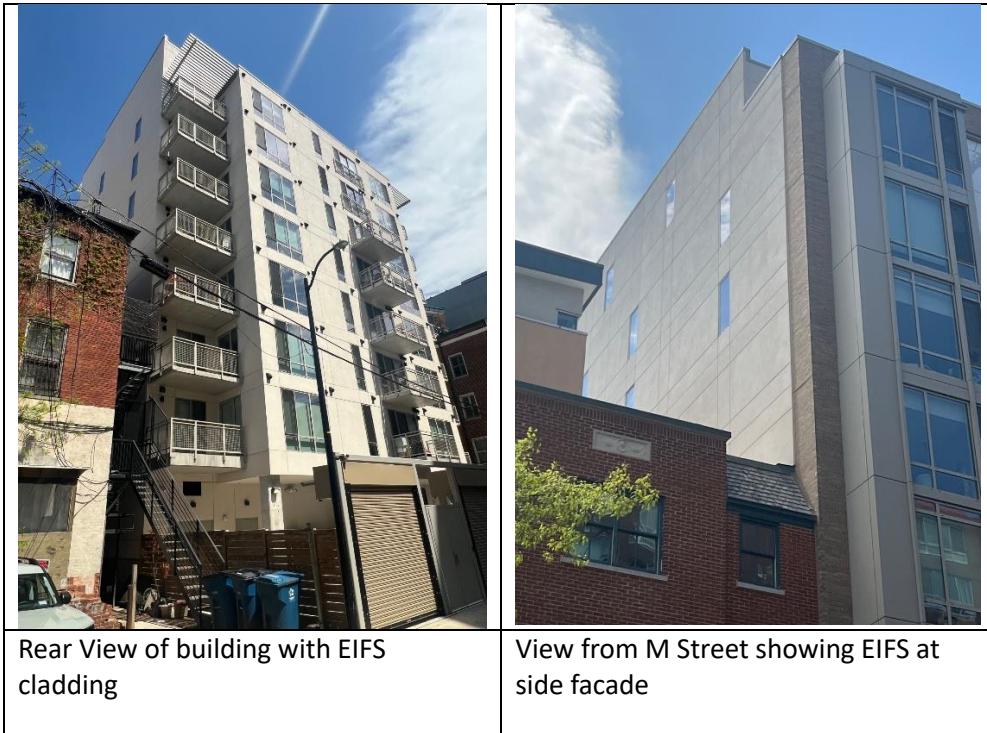
Warranty and Testing: EIFS stands out as one of the few, if not the only, tested cladding systems available, while other claddings like stucco and rainscreens are considered assemblies. EIFS applications are standardized and must meet over 40 specific tests as per ASTM 2568, including NFPA 285 and ASTM E2273. This rigorous testing ensures consistent performance and reliability. Additionally, Evaluation Service Reports (ESRs) are provided for EIFS systems, offering a comprehensive evaluation of their compliance and performance. In contrast, stucco systems often rely on proprietary assemblies, and while some manufacturers offer many components, they may not provide a warranty if all components are not used. The ESR for stucco typically lies with the insulation manufacturer, meaning that if foam is used behind stucco, the specifier must ensure the foam is acceptable for use in that application. This adds an extra layer of due diligence for stucco installations, making EIFS a more straightforward and reliable choice.

Durability and Impact Resistance: EIFS offers multiple levels of impact resistance through changing the weight of the mesh embedded in base coat on top of the insulation. Stucco's impact resistance comes from the strength of the mortar bed. If EIFS is damaged the repair is quite simple, remove the small punctured area, replace the foam, install base coat mesh and finish. If stucco is damaged, the damage is usually much wider as cracking spread beyond the impact area. This becomes difficult to repair as a much wider area needs to be removed. EIFS manufacturers also test to meet Miami/Dade hurricane requirements which include missile impact tests.

Passive House and Energy Performance: From an energy performance perspective, the difference between stucco and EIFS largely comes down to the clipping system. Stucco requires a more extensive Z-girt system that must be fully thermally broken, which can be more complex and costly to install. In contrast, EIFS only requires thermally broken clips, simplifying the installation process. This difference in clipping systems also impacts the efficiency of continuous insulation. With EIFS, the continuous insulation does not need to be derated as much; a clip system typically derates continuous insulation

by around 6%, whereas a Z-girt system derates it by approximately 13%. This means EIFS can maintain higher insulation performance, contributing to better overall energy efficiency.

Case Study: 1224 M Street NW: 49 Unit luxury apartment building in the heart of Logan Circle. Completed in March 2023. EIFS installed at sides and rear façade.



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4/15/2024

Date

EIFS MAINTAINENCE

Manufacturer's Recommended Cleaning

Typical Cleaning of Light-Colored EIFS (Sto Corp. Products)

General Overview

Sto's EIFS (Exterior Insulation and Finish Systems) require regular maintenance to retain their aesthetic appearance and functional integrity, especially for light-colored finishes that are more susceptible to visible staining. Cleaning should be performed periodically based on environmental exposure and location-specific conditions such as pollution, tree cover, or proximity to roadways.

Recommended Cleaning Methods

1. Routine Maintenance Cleaning

- Frequency: Annually or as needed.
- Tools: Low-pressure water spray, soft-bristle brush or sponge.
- Process:
 - Rinse the surface with clean, low-pressure water (maximum 500 psi).
 - Use a soft brush or sponge with mild detergent diluted in water.
 - Gently scrub soiled areas in a circular motion.
 - Rinse thoroughly with clean water to remove all residue.

2. Use of StoClean Products

Sto offers specialty cleaners tailored for EIFS finishes:

- StoClean Crystal #81701 - A concentrated liquid cleaner for general maintenance and removing dirt, grime, and biological growth.
- Dilution: Typically 1:10 ratio with water; always refer to product instructions.
- Application: Apply using a pump sprayer or soft brush, allow to dwell for 5-10 minutes (do not let dry), then rinse with low-pressure water.

3. Removal of Biological Staining (Mildew/Algae)

- Use: StoClean products or a diluted solution of bleach (no more than 5% sodium hypochlorite) mixed with water and mild detergent.
- Application:

- Wet the surface.
- Apply the solution and allow to dwell.
- Scrub gently and rinse thoroughly.
- Repeat if necessary.

 Note: Test cleaning solutions on a small inconspicuous area first to confirm compatibility.

Precautions

- Avoid high-pressure washing as it may damage the finish.
- Do not use harsh or abrasive cleaners.
- Do not allow cleaning agents to dry on the surface.
- Avoid acidic cleaners or solvents not approved by Sto.

Additional Maintenance Tips

- Promptly repair any cracks or damaged areas in the EIFS to prevent water infiltration.
- Ensure proper drainage around the building to reduce dirt accumulation and biological growth.
- Consider applying StoCoat Lotusan or StoCoat Climasan for enhanced resistance to dirt and microbial growth.