EIFS Troubleshooting

PART I

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EIFS don’t normally require much maintenance. When repairs are needed, they are usually easy to do. This two-part article provides insight into how to diagnose and fix common problems.

EIFS are not completely maintenance-free. It’s a good idea to routinely check the condition of the wall. This involves more than just standing on the ground and staring. It means getting up on a ladder and looking at what’s going on. A wall system consultant can help you with this if you’re not sure what to look for. Such preventive maintenance can be a big help in staving off major problems because you catch them before they get out of hand.

Before getting specific about diagnostic procedures and repair methods, there are several aspects of EIFS that bear mentioning:

The key to properly diagnosing problems is thoroughness.

The proverbial mild detergent, brush and elbow grease approach often works on simple dirt and mildew/algae. The trick is not to use too much force lest the coatings be injured.

• Specialty cleaning materials are a good solution. Products are available for removing paint, efflorescence and graffiti.

Occasionally the finish may develop small darkspots. This is often caused by iron in the finish. This iron can come from the site (from a nearby welding or metal grinding operation or by using carbon steel tools) or from the factory. Factory rust is caused by microscopic iron particles in the aggregate.

To remove rust, you need to do two things. First remove the rust particle by digging it out of the finish. Then clean the stain with a rust stain remover. Painting over rust particles doesn’t always work because the rust continues growing under the new coating and may “bloom” through the surface again.

Check with the EIFS manufacturer. Some manufacturers make their own cleaning materials or can recommend specific products or do-it-yourself mixtures.

Do a test patch first. Before using a new method or a “home brew,” test it somewhere that it won’t harm anything, just in case it does cause damage.

Finish over Finish

It is difficult to apply a new EIFS finish directly over an old one. The texture of the old finish is usually
too rough, and the new finish does not texture properly when worked over a rough surface. Thus, the old finish first needs to be made smooth. This is done by filling-in the texture of the old finish.

Recommendations of EIFS manufacturers vary regarding the filling material. Some allow using their base coat adhesive. Others have special products for this purpose. Most EIFS textures are too grainy to allow filling in the texture with paint alone. Applying the new finish is almost always done with a trowel, since spraying always seems to end up where it’s least wanted.

**Painting**

The color of an existing EIFS wall can be changed. Since removing the finish without damaging the base coat is almost impossible, the normal approach is to paint over the old finish.

**Surface preparation:** Before putting anything over the existing finish, the surface must be cleaned. This usually involves scrubbing the surface with a mild detergent and flushing it. Then the new paint is applied.

**The Painting Process:** Existing EIFS finishes can be painted using brushes, rollers or spray. Rollers work well because they can get the paint down into the texture grooves without a lot of fussy hand work. Experiment with various roller naps to find one that works well with the finish at hand.

Paint tends to fill the pores of the finish, changing its appearance to a more “filled” or “plastic” look. Test your paint first in an inconspicuous area to see if you like the way it looks. Some EIFS manufacturers make special paints for EIFS. They are compatible with their finishes and are formulated to maintain the original appearance.

If you’re not using the EIFS manufacturer’s paint, check with them anyway. They usually have good ideas on brands or other installation suggestions. The right type of paint is usually a water-based exterior acrylic. Be careful using solvent-based paints. Some solvents can leach through the lamina and attack the EPS.

If you need to obtain paint that will match your EIFS and have a pail of the original finish, you can “make paint” from the finish. Simply run the finish through a strainer to remove the aggregate and use it as paint. This works well for small touch-up jobs.

**Water Vapor Problems**

Putting a coating on top of an existing EIFS can cause condensation problems in walls where they did not occur before. This is due to the increased vapor flow resistance that the coating gives to the lamina.

On most buildings in most climates, water vapor is not a problem, but be wary when using highly vaporresistive paints and thick coat-
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ings (such as a new lamina). Also, be careful if the building’s interior is humid (pools, laundries and so on) and in extreme climate areas. EIFS manufacturers can help you as they have the diagnostic tools to see if the coatings will cause condensation problems.

When applying other than the original EIFS manufacturer’s products to the existing lamina, keep in mind that doing so may affect the warranty. Check with the manufacturer first.

Applying a darker color to the finish can dramatically change the thermal expansion properties of the EIFS. This could require changing the spacing and/or size of the wall’s joints to accommodate the increased movement. Clearly this would be a major project and is to be avoided if possible—perhaps that lighter color wouldn’t look so bad after all.

Likewise, the increased temperature of the lamina which can occur as a result of using very dark colors, should be checked. It is possible, under extreme conditions, for the lamina’s temperature to get so hot that the EPS would melt.

About the Author:
Robert G. Thomas, Jr. is a wall systems consultant. A graduate of Carnegie-Mellon University’s architecture program, he has been involved in the exterior wall business for his entire career. Formerly Manager of Technical Services at Dryvit Systems, Inc., he played a major role in establishing technical standards for the US EIFS industry.

This article was based on excerpts from Exterior Insulation and Finish System Design Handbook. Copies of the book are available for $49.95 plus shipping and handling. To order, or for further information, write: CMD Associates, Inc., 21236 Tramp Harbor Road Southwest, Vashon Island, WA 98070, or call (206) 463-9840.

Next month: Part II covers diagnosis and repair of cracks and leaks.