

TECHNICAL BULLETIN

Procedures for Repairing EIFS

INTRODUCTION

Impact damage can result from various causes such as vandalism, hail or landscaping activities. Impact exceeding the strength of the reinforcing mesh used in EIFS construction can rupture the EIFS surface. EIFS can be designed to have tremendous impact strength. Before repairing punctured EIFS, consideration should be given to the anticipated use conditions. If EIFS are expected to withstand routine impact force, a high-impact surfacing system should be installed. In addition to creating a durable repair, installing an all-new surfacing system may provide an enhanced appearance.

Properly installed EIFS should not crack. When cracking is found, a root cause analysis is needed to determine the cause of cracking, otherwise repairs may not be effective. In some cases, EIFS installation deficiencies can be corrected. Where underlying substrate conditions or structural movement cause cracks to form, a more extensive repair may be needed.

REPAIRING IMPACT DAMAGE

1. Cut around the damaged area with a razor knife, cutting through all layers, to the substrate or the water-resistive barrier (if the system is an EIFS with Drainage). Make sure the patch area is large enough to easily work within, even if the damaged area is small.



2. Carefully remove the EIFS lamina.
3. Remove the damaged EPS. Inspect the water-resistive barrier and repair as necessary if damaged during EIFS removal.



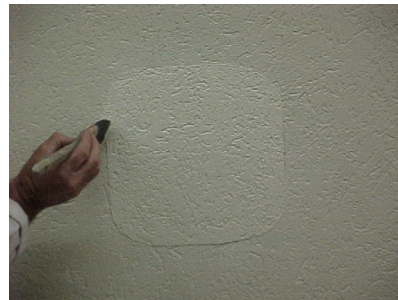
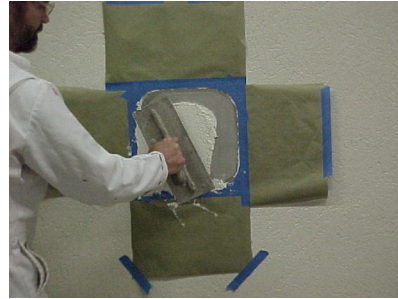
4. A hand-held grinder can be used to remove the finish surrounding the removed section of EIFS. Do not grind into reinforcing mesh; remove finish in a uniform area, at least 3" in all directions surrounding the removed portion of EIFS. Alternately, if working in an area where dust control is needed, use of paint remover is recommended. Apply paint remover gel around the puncture and allow it to soften the finish. Use a scraper to remove the finish, and coarse sandpaper to roughen the base coat.
5. Remove all debris (dust, EPS beads, etc.) from cutting and grinding.

- Cut new EPS to the shape of the EPS void, creating a tightly fitting repair. Apply Senergy Alpha or Alpha Dry Base Coat to the new EPS and press it into place. Allow the adhesive to dry. Insert EPS slivers into any gap greater than 1/16-inch wide. Do not fill gaps between insulation board with base coat. Sand or rasp the surface flush with adjacent EPS.

Note: For mechanically fastened EIFS, small areas of EPS can be friction fit. Larger areas of damage will require stud to stud removal to fasten new EPS.



- Mask the existing finish around the repair area.
- Cut Senergy Flexguard 4 Reinforcing Mesh so that it overlaps at least 1" onto existing base coat and mesh. Embed Senergy Flexguard 4 Reinforcing Mesh into Alpha or Alpha Dry Base Coat, ensuring that fresh base coat and mesh is level with the existing lamina. Use a double layer of Flexguard 4 when repairing damaged corners. Allow to dry and scrape any trowel marks prior to finish application.
- Apply color and texture matched Senergy finish. Float the finish to match existing finish. Remove the masking tape before the finish dries and use a brush to blend the wet edge of the finish into existing finish and allow to dry.



REPAIRING CRACKS

- Identify and mark the extent of cracking so that the entire cracked area is repaired. For aesthetic reasons, resurfacing should be terminated at an architectural break in the wall such as a reveal, change in plane or change in elevation. Doing this minimizes the contrast between resurfaced areas and adjacent finishes.
- If working in an area where dust control is needed, use of paint remover is recommended. Apply paint remover to the marked area and allow it to soften the finish. Use a scraper to remove the finish, and coarse sandpaper to remove base coat down to the reinforcing mesh. Alternately, a hand-held grinder can be used to remove both finish and base coat. Do not grind into reinforcing mesh. Remove finish and base coat at least 3" in all directions surrounding the crack.
- Assess the root cause of cracking to select the appropriate repair method.
 - If cracking is caused by excessive gap between insulation boards, remove base coat and mesh surrounding the crack. Fill the crack with EPS slivers. Do not fill gaps between insulation board with base coat. Shave or rasp foam flush with the surrounding insulation. Embed Senergy Flexguard 4 Reinforcing Mesh in Alpha or Alpha Dry Base Coat over the repaired insulation board and extending at least 2 1/2" onto existing base coat and creating a smooth transition from existing base coat to new base coat.

- If cracking is caused by excessive gap between insulation boards that has been filled with base coat, the base coat must be removed. Cut out surrounding EPS insulation and follow the repairing impact damage procedure.
 - If cracking is caused by mesh that has insufficient or no overlap, embed Senergy Flexguard 4 Reinforcing Mesh and Alpha or Alpha Dry Base Coat over the affected area and extend at least 2 1/2" onto existing base coat. Create a smooth transition from existing base coat to new base coat.
4. Apply masking tape around the area that has been repaired. Apply color and texture matched Senergy finish. Float the finish to match existing finish. Remove the masking tape and use a brush to blend the wet edge of the finish into existing finish and allow to dry.

AESTHETIC REVEALS

For cracks that occur in aesthetic reveals the following procedure can be used to seal the crack and protect against moisture intrusion:

1. Clean the area around the crack and allow it to dry.
2. Apply bond breaker tape centered over the crack to prevent three-sided adhesion.
3. Install Sikaflex® Thoroseal HY 100 or NP 150 sealant over the bond breaker tape. Tool the sealant in two directions, ensuring a minimum 1/4" contact to the EIFS surface along each side of the reveal. Allow sealant to dry.

CONSIDERATIONS AND CONDITIONS:

- Realize that repairs may be visible after completion, matches to existing finish texture and color may be difficult.
- Consider recoating or resurfacing the affected panel or elevation if aesthetic repair is needed.
- Consider resurfacing all areas that are subject to impact using SikaWall® Ultra HI 20 Mesh and Flexguard 4 Reinforcing Mesh. This will create a strong, durable, and attractive repair. Reference Technical Bulletin *Procedure for Resurfacing EIFS* for further information.

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