

TECHNICAL NOTE 97.10

REPAIR OF DAMAGED CONCRETE SURFACE ON LIGHTGUARD® / HEAVYGUARD® ROOFING

LIGHTGUARD / HEAVYGUARD Protected Membrane Roof Systems will frequently develop micro cracks in the concrete surface during shipping and handling. These cracks are cosmetic only and do not affect the long-term performance of the roofing material. Most cracks are only visible during drying periods after a rain or snowfall. When the boards are totally dried, the cracks disappear. If, however, the boards are broken during installation, we recommend that they be replaced.

It is not unusual to encounter broken corners or edges of the concrete surface. Cracking and chipping are natural and cannot be entirely eliminated from cement products. The appropriate repair of chips should ensure the long life of the LIGHTGUARD / HEAVYGUARD Roof Insulation. These damaged areas should be repaired as soon as possible in order to protect the exposed Styrofoam brand plastic foam from degradation is due to prolonged exposure to sunlight. If the foam is not damaged, coat with an outdoor latex paint.

The broken or damaged area of the concrete may separate cleanly from the surface of the Styrofoam or it may break away, tearing the foam and causing a portion of the foam to be removed while still bonded to the broken piece of concrete. In either case, the broken piece should be replaced and/or the damaged area be repaired as soon as possible.

If the broken piece can be retrieved, the repair technique can be simply a matter of bonding the piece back into place using VULKEN 116 SEALANT, by Mameco International as the adhesive. This repair technique can be simply accomplished during most seasons of the year following manufacturer's instructions.

Before bonding the broken piece back into place, clean both surfaces to be bonded and be sure that they are dry. The preferred method for adhesive application is by using a cartridge of VULKEM 116 SEALANT, extruding a ¼" bead around the perimeter of broken area, and immediately placing the broken piece into position using firm pressure to assure adhesive transfer and good fit. If the broken area is larger than a nominal 8" x 8", then it is advisable to also extrude a bead of mastic in the center portion of the damaged area before replacing the broken piece.

The recommendation for repairing broken concrete areas when the broken piece cannot be found or is not usable is to use a latex modified mortar mix. The most popular and easily attainable admixture for concrete is Acryl* 60, produced by Standard Dry Wall Products. However, any good acrylic latex admixture having 20% used to dilute the latex. Use straight Acryl* 60 as purchased to mix the cement/sand mixture into a workable slurry for easy application. A recommended dry mix proportion is 3 parts of concrete sand (ASTM C-144) and 1 part of Type 1 Portland Cement ASTM C-150 (do not use air entrained cement). Place with a flat metal towel and float or texture finish with a wood float. Do not make repairs if temperatures are below 45°F for a minimum of 72 hours to ensure good initial curing. Cover and adequately protect repaired area if temperatures are expected to drop near freezing point within the first few days of repair.

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