TECHNICAL BULLETIN

FOR TARGET MARKET ROOFING

Sarnafil BUILDING TRUST

Subject: Liquid Flashing Detailing Guide – Revised **19-02**

PRODUCTS

Liquid Flashing consists of polymethylmethacrylate (PMMA) resin, catalyst, and fleece fabric, and is approved for use on Sarnafil® and Sikaplan® roofing assemblies. Liquid Flashing is used to detail unusual shaped penetrations where sheet membrane is less effective such as I-beams, angle irons, close multiple conduits, etc., providing an effective alternative to high maintenance pourable sealer pockets. Liquid Flashing detailing can be included in Sika Corporation-Roofing warranties for up to twenty (20) year durations.

Liquid Flashing Primer: Liquid PMMA primer, required on wood and concrete surfaces before the liquid flashing detailing can be applied.

Liquid Flashing: Liquid PMMA, offered in summer grade (SW) and winter grade (WW) versions. Use Liquid Flashing SW in temperature ranges of 59°F – 104°F (15°C – 40°C) and Liquid Flashing WW in temperature ranges of 23°F – 68°F (-5°C – 20°C). Substrate and ambient temperatures must be within these ranges for the material to cure properly.

Liquid Flashing Catalyst: Reactive agent based on dibenzoyl peroxide, mixed with Liquid Flashing Primer and/or Liquid Flashing to induce curing. **WARNING:** May cause fire if stored in direct sunlight or in temperatures above 86°F (30°C), store away from reducing agents, strong oxidizers, acids, alkalis and accelerators, always store loose packets in closed containers in a cool, ventilated and dry location away from heat sources.

Liquid Flashing Fleece: Reinforcing fleece fabric, used with Liquid Flashing to flash penetration.

Consult Product Data Sheets and Safety Data Sheets for additional information.

APPLICATION GUIDELINES

Although Liquid Flashing has a very low VOC content of 4.2 g/L, there is a strong odor. Precautions should be taken to prevent odors and/or vapors from entering the building/structure, including but not limited to turning off and sealing air intake vents and other means of ingress for odors and/or vapors into the building/structure during product application and cure.

Surface Preparation

Grind concrete and masonry surfaces with diamond cut wheel to remove laitance and/or contaminants.

Clean and prepare metal surfaces to near white metal with an appropriate power tool. If power tools are not available, use abrasive paper with a grain grit size of 20 to 40 to remove all loose particles including paint flakes, rust, and contaminants.

Use abrasive paper with grain grit size of 80 to 100 to lightly sand rigid plastic surfaces.

Wipe metal and rigid plastic surfaces with Sika's Seam Cleaner and allow to dry.

After proper preparation, all surfaces shall be clean, dry, free of dirt, dust, debris, loose particles, loose paint, rust and other contaminants.

Clean the membrane a minimum of 12 in (305 mm) around the penetration using use a non-solvent based cleaner such as Simple Green or Orange DEP.

After removing all loose particles and dust, prime wood and concrete surfaces with Liquid Flashing Primer. Refer to the Liquid Flashing Primer product data sheet for Liquid Flashing Catalyst dosage rate, mixing instructions and application procedures. Allow Liquid Flashing Primer to cure completely before applying Liquid Flashing. Liquid Flashing Primer is considered cured when it is dry to the touch.

Membrane around penetrations shall be secured on a minimum of two sides. For larger penetrations more securement shall be required.

If a gap of more than ¼ in (6.3 mm) exists between edge of horizontal membrane and vertical penetration, the gap must be filled with either Sikaflex 1A.

Liquid Flashing Fleece

Pre-cut vertical and horizontal pieces to fit around the penetration allowing for a 2 in (51 mm) overlap with adjoining pieces. Vertical flashing pieces must extend 2 in (51 mm) onto the roof membrane and should be a minimum of 8 in (203 mm) above the roof where possible. Horizontal flashing pieces must extend a minimum of 4 in (102 mm) beyond the leading edge of the penetration, or a minimum of 2 in (51 mm) beyond the edge of the fastening plate.

Once the edges of the fleece are determined, mark a line on the membrane ½ in (13 mm) beyond the edge of the fleece and apply painter's tape. This will accommodate the ½ in (13 mm) of non-reinforced Liquid Flashing needed to terminate to the membrane. With the tape in place, clean the membrane within the area using Sika Seam Cleaner, acetone, or methyl ethyl ketone (MEK) as well as wiping the penetration clean of any residual surface prep dust.

Mixing

Thoroughly stir the entire container of Liquid Flashing with a slow-speed (200 to 400 rpm) mechanical mixer (electric drill with a mixing blade) for two minutes.

After stirring, pour 1 liter of Liquid Flashing into a clean plastic container.

Add 2 level tablespoons of Liquid Flashing Catalyst to Liquid Flashing Summer White or 4 level tablespoons to Liquid Flashing Winter White. Mix using a slow-speed mechanical mixer with a separate mixing paddle for two minutes (do not use mixing paddle after the addition of catalyst to mix open large container of Liquid Flashing).

The amount of Liquid Flashing Catalyst used may alter depending on ambient and surface temperatures, the values given are based on the mid-range temperatures to provide an approximate pot life of 10 - 15 minutes after mixing.

Application

Using a small ½ in (13 mm) nap roller with rounded edges or 2 in (51 mm) disposable paint brush apply 55 mils (1.4 mm) of catalyzed Liquid Flashing onto the roof membrane extending slightly onto the painters tape. Embed the pre-cut horizontal Liquid Flashing Fleece into the wet Liquid Flashing. Use the roller or brush to eliminate wrinkles and air bubbles while completely saturating the Liquid Flashing Fleece. If required apply additional catalyzed Liquid Flashing at the 2 in (51 mm) overlap between the horizontal Liquid Flashing Fleece layers, there should never be dry fleece touching dry fleece.

Apply 55 mils (1.4 mm) of catalyzed Liquid Flashing onto the penetration up to the finished flashing height and onto the horizontal flashing fleece. Embed the pre-cut vertical Liquid Flashing Fleece into the wet Liquid Flashing as well as embedding the 2 in (51 mm) horizontal fingers. Use the roller or brush to eliminate wrinkles and air bubbles while completely saturating the Liquid Flashing Fleece. Apply additional catalyzed Liquid Flashing at the 2 in (51 mm) overlap between the vertical Liquid Flashing Fleece layers, there should never be dry fleece touching dry fleece.

Apply 25 mils (0.6 mm) of catalyzed Liquid Flashing over the entire exposed vertical and horizontal flashing fleece, terminating at the finished flashing height on the vertical and onto the painters tape on the horizontal. Make sure the fleece is fully saturated without any dry spots. Remove the painters tape immediately after finishing applying the final 25 mils (0.6 mm) of catalyzed Liquid Flashing.

Complex and/or irregular shapes including nuts, bolts, etc. may require an additional 25 mils (0.6 mm) of catalyzed Liquid Flashing to ensure full coverage. Wait one hour before applications. For repairs or touch-up, wipe cured Liquid Flashing with Sika's Seam Cleaner to clean and allow to dry.

Coverage

43 ft^2 (4 m2) per 2.6 gal (10 L) pail at 115 mil (2.9 mm) total thickness

Inspection & Quality Control

Inspection of completed detail should be done by visual means only. Touch after 60 minutes to determine if liquid flashing is cured, uncured material will be soft and may transfer to the glove. Remove uncured liquid flashing, clean off completely and re-flash with new liquid flashing. If fishmouths, gaps, voids, openings, or exposed fleece is found after liquid flashing has cured, solvent clean and re-flash over these exposed areas.

If a quality control test is required, cut a 3 in (76 mm) x 12 in (305 mm) piece of flashing fleece, embed half the strip in liquid flashing following guidelines for installation as stated above, leaving 6 in (152 mm) of fleece exposed. The quality control test can be performed to the penetration, next to the penetration onto the membrane, or both. After 2 hours, pull on the exposed fleece at a 90° angle. Adhesion is acceptable if the fleece flashing strip pulls with resistance. If the flashing strip fails, remove all unadhered liquid flashing and conduct another quality control test. If the flashing strip was tested on the penetration, remove any loose material and complete detail with new liquid flashing while covering the test strip. If the flashing strip was tested to the membrane, and the specifier requires clean membrane next to the penetration, cut out liquid flashing test area completely and weld a membrane patch over the cut area.

LIMITATIONS

- Liquid Flashing cannot be used as a substitute where common standard membrane details are used and will provide equal to or better water tightness than the Liquid Flashing solution.
- Liquid Flashing cannot be used to flash a drain or line a gutter.
- Liquid Flashing cannot be used where there is ponding water.
- Liquid Flashing cannot be used for square scuppers.
- Liquid Flashing cannot be used to strip in any metal edge.
- Liquid Flashing cannot be used in lieu of sealants, a clamping ring, and/or a reglet.
- Liquid Flashing cannot be used over pitch pockets.
- Liquid Flashing cannot be used to flash to glass or windows.
- Liquid Flashing cannot be used at low flashing height conditions less than 4 in (101 mm).
- Liquid Flashing cannot be used as a patch.
- Liquid Flashing cannot be painted.
- Liquid Flashing cannot be used in waterproofing applications.
- Liquid Flashing is not resistant to oils, fats, and grease.