Energizer® Fluid-Applied Restoration Systems

Fully Reinforced Modified Bitumen Application Guidelines

since 1895

DESCRIPTION

The Energizer® Restoration Systems include:

(a) Energizer K Plus FR is a multi-purpose, rubberized, liquid waterproofing membrane designed to restore and upgrade fire ratings on existing smooth or mineral surfaced SBS, aged APP and smooth built-up roof surfaces.
(b) Energizer BK is a multi-purpose, asphaltic/coal tar blend, liquid waterproofing membrane designed to restore and protect existing smooth or mineral surfaced SBS, aged APP and smooth built-up roof surfaces.
(c) Energizer LO is a multi-purpose, asphaltic polyurethane-based, low-odor, liquid waterproofing

MATERIALS

The materials used in Energizer restoration systems may include Energizer K Plus FR, Energizer BK or Energizer LO; Grip Polyester™ Firm; Garla-Prime™ ;Garla-Prime VOC; and Garland D7 or Simple Green Oxy Solve cleaning solution.

APPLICATION EQUIPMENT

1. 3/8" (10 mm) shed resistant nap roller
2. 1/4" (6.3 mm) notched squeegee
3. Heavy duty electric power drill
4. Jiffy mixer blade (ES model)
5. Wet Mil Gauge
6. Graco 833 or equivalent if spraying

INSTALLATION

Installation of the Energizer restoration systems are accomplished in the following steps: repair, preparation, priming and application.

Repair
All necessary repairs must be done according to good construction practices. Energizer should not be applied over roofing, insulation, or related materials that are saturated with moisture. For applications over existing roof systems, a complete inspection must be completed, including core cuts and moisture detection scans to determine where trapped moisture may exist. Any wet insulation must be replaced with new materials of equal thickness. Energizer should be used with Grip Polyester Firm reinforcement fabric in appropriate widths to repair and reinforce all defects, cracks, or other areas requiring reinforcement.

Prepare
A clean surface is required for proper adhesion of Energizer product. Surface preparation is the key to successful applications of all coating systems. All dirt, debris, oils, and contaminants that can interfere with adhesion of coatings must be removed by the most effective method possible. High pressure water (2,000 psi minimum) is the preferred method when appropriate. When high-pressure water washing is used, it should be done at a pressure suitable to remove embedded dirt and contaminants without damaging the substrate. Care must be taken to make sure water does not intrude into the building. It is very important to note that inadequate preparation of surfaces can lead to premature failure of the coating system. After cleaning with Garland D7 or Simple Green Oxy Solve, ponding areas should be rinsed at least twice to be sure all contaminants are removed to prevent adhesion issues. A tape test should be used to determine acceptability of the cleaned surface for coating application. This is done by applying masking tape to the surface to be coated and then peeling off the tape. If the adhesive side of the tape shows contaminants that will interfere with the adhesion of the coatings, then further cleaning or use of a primer may be necessary. Consult your local Garland Representative for complete information on treatment of the surface.

Prime
After dust, dirt, and debris has been removed, surfaces should be primed with Garla-Prime or Garla-Prime VOC immediately after cleaning to prevent surface contamination. Garla-Prime and Garla-Prime VOC should be applied at the rate of 0.5 gal/100 sq. ft. (0.20 l/m^2) over the entire roof.

Application of Fully Reinforced Energizer System

1. Determine where first run of Grip Polyester Firm reinforcement will be started. On sloped roof surfaces, the first run of fabric should run parallel to the low edge of the roof with subsequent runs applied using shingling method, overlapping the previous run a minimum of 3 in. (75 mm). A chalk line can be used to guide the first run.
2. After positioning the reinforcement, apply Energizer to the surface where the reinforcement is going to be applied. Do not apply Energizer too far ahead of fabric or coating may start to dry before fabric can be embedded. The minimum application rate should be 3.0-3.5 gal/100 sq. ft. (1.2-1.4 l/m^2) depending on the roof surface type and which Energizer product is used. Immediately roll 40 in. (200 mm) width Grip Polyester Firm reinforcement into the Energizer coating. Care should be taken to lay the fabric tight to the roof surface without air pockets, wrinkles, fish mouths, etc.

Application of Energizer Finish Coat
After embedding Grip Polyester Firm reinforcement into the Energizer, apply additional Energizer to completely saturate the fabric at the minimum application rate of 3.0-3.5 gallon per 100 gal/sq. ft. (1.2-1.4 l/m2) depending on the roof surface type and which Energizer product is used. This saturation coat should be applied as soon as possible after embedding the reinforcement into the Energizer. Allow to dry for a minimum of 15-30 days before applying reflective coatings.

Note: Total Energizer used to embed and saturate the Grip Polyester Firm reinforcement should be a minimum of 6.0-7.0 gal/100 sq. ft. (2.4-2.8 l/m^2) depending on the surface type and which Energizer product is used.

Application of Minerals or Reflective Coatings
If granule finish is desired, apply immediately after Energizer finish coat application. When granules are not applied, after the Energizer system has cured a minimum of 15-30 days, apply either Garla-Brite, Silver-Shield or Pyramic Plus LO at the specified coverage rate.

Note: During final application of the Energizer restoration system, special attention should be given to coating flashings and other critical areas to build adequate membrane thickness. Multiple coats may be necessary on verticals to prevent sagging.

Inspection
Inspect entire roof area and touch-up deficient areas with additional Energizer or reflective coating as necessary to ensure complete and uniform coverage. Special attention should be given to critical areas of the roof, including roof penetrations, transitions, flashings, etc.

LIMITATIONS

These are general guidelines for application of the Energizer restoration systems. The material requirements may vary depending on the specific job requirements. If unusual conditions exist, contact your local Garland Representative. Garland's fluid-applied elastomeric roofing systems must be applied to structurally sound substrates and properly prepared surfaces. All surfaces must be clean and dry before application. Garland's roofing systems must not be applied over wet insulation or related materials. Failure of the substrate does not constitute failure of the Garland coating or system. Garland's systems are designed for use on roofs with positive drainage.

1. Energizer products are solvent-based asphaltic or asphaltic-polyurethane-based liquid waterproofing products. Consequently, application of these materials must not be done when rain or other conditions such as fog or heavy dew are possible, as the product must dry sufficiently to be resistant to these occurrences. Increased curing from too much moisture caused by rain or dew can cause the product to blister. Drying time is affected by numerous factors including – but not limited to – temperature, direct sunlight, relative humidity, air movement, product application thickness. Do not apply when temperatures are below 40°F (4°C) or expected to drop below freezing before coating is dry. Do not apply if the ambient temperature is 95°F (35°C), or higher.
2. Surfaces must always be clean before applying Energizer. Care must be taken to ensure that on-site manufacturing emissions or extended time intervals after original cleaning do not interfere with any stage of the coating applications. If either condition occurs, cleaning may be required again.
3. Adequate fluid-applied system thickness is essential to performance. If the applicator is unfamiliar with gauging application rates, we suggest that a controllable area be measured and the specified material be applied. In all cases, all minimum specified material must be applied and proper minimum dry film thicknesses must be achieved. A wet-mil gauge may be used to measure coating thickness to assist in a uniform coverage rate throughout the entire fluid-applied roof system. Care must be taken to ensure that all completed areas including all flashings, roof penetrations, etc. are coated sufficiently to ensure a watertight seal.
4. Deviations from these application guidelines are strictly prohibited.
5. Applicator must comply with all applicable local, state, and federal regulations if lead-based paint or other hazardous materials are encountered.
6. Roofing is hazardous work and is a low odor fluid-applied waterproofing membrane that cures much faster than traditional asphalt coatings are very slippery when wet. Comply with all protection rules and regulations.
7. Ensure preparation and planning regarding typical construction odors.

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