GREEN-LOCK® PLUS

Green-Lock Plus

2-Ply Cold Application Guidelines

DESCRIPTION

Garland's Green-Lock Plus adhesives are polyether-based, asphalt free, high solids, and moisture-cured. When installed with Garland approved modified bitumen base and/or cap sheet this forms a strong resilient adhesive bond. This low VOC, solvent free adhesive is ideal for odor sensitive environments such as schools or hospitals.

MATERIALS

The materials used in the system may include Green-Lock Plus Membrane Adhesive, Green-Lock Plus Flashing Adhesive, and Metal Roof Primer (for all metal substrates) combined with approved modified bitumen base and cap sheets.

APPLICATION

Equipment

- Suitable trowel for applying adhesive to flashing details if necessary
- Roofer's knife with hooked blade
- Long-handled (standing) 3/8" (0.9525 cm) notched squeegee that has a width of 12"-16" (30.48 - 40.64 cm) for applying interply adhesive and a 1/2" (1.27 cm) notched squeegee for flood coat and gravel applications
- Use a push broom or a light weight roller to press membrane into adhesive
- Weights for edges or corners that potentially curl up when the sheets have not had long enough to relax

Considerations

- Roof Surface must be at least six Fahrenheit degrees or three Celsius degrees above the dew point and rising.
- Store the Green-Lock Plus materials properly to protect it before use. Keep dry and at 70˚F (21˚C) for 24 hours prior to application.
- Leave the lids on the product until you are ready to use that container. Open containers will skin and start to cure.
- Do not apply Green-Lock Plus Membrane Adhesive or Flashing Adhesive that has been improperly stored or exposed to moisture.
- IF THE MATERIAL ISN'T BONDING…STOP THE APPLICATION!
- Refer to the Green-Lock Plus roof systems' specification for additional requirements.
- Substrates must be free of dust, dirt, oil, debris and moisture
- Primer, if used, must be applied at the specified rate and must be allowed to thoroughly dry.
- Work with manageable lengths of modified bitumen base and cap sheets for the particular job. Where appropriate, cut rolls into 1/3 or 1/2 roll lengths and allow material to relax prior to installation

NOTE: FIELD AND FLASHING LAPS CANNOT BE HEAT WELDED WHEN USING GREEN-LOCK PLUS ADHESIVES.

INSTALLATION

(a) Base Sheet Installation Over Nailable Substrate

1. Beginning at the low point of the roof, fasten one-ply of approved base sheet to the nailable substrate substrate, in accordance with project specific wind uplift calculation and fastening patterns
2. Start with an appropriate roll width (1/3 or 1/2 roll width) to accommodate off setting of side laps of subsequent layers of base sheet. Install so that no side laps are against the flow of water.
3. Overlap base sheet side laps 4" (10.16 cm) and end laps 8" (20.32 cm). Offset end laps a minimum of 3' (0.914 m).
4. Proceed with the installation of the modified bitumen base and cap sheet in Green-Lock Plus Membrane adhesive in accordance with the proceeding section.

(b) Installation Over Approved Roof Board

Approved Roof Board: 1/2" (12.7 mm) min. G-P Gypsum DensDeck Prime®, DensDeck StormX, Securock®, high density asphalt coated wood fiberboard.

1. Sweep or blow away any dust, dirt or sand particles that could interfere with adhesion.
2. Relax base sheet prior to application (until sheet lies flat) and work with no more than 18' (5.5 m) lengths. This will allow the sheet to sit down into the adhesive.
3. Snap chalk lines for area of application to prevent material from drying out in areas that material will not be applied immediately.
4. Prime any metal substrates with Metal Roof Primer and allow to completely dry.
5. For the base layer, pour Green-Lock Plus Membrane Adhesive at a rate 2-2.5 gallons per 100 sq. ft. (0.82-1.02 l/m²) onto the substrate.
6. Work outwards to eliminate voids. Coverage based on a smooth surface, uneven surfaces or more porous roof boards will increase the coverage rate.

7. Start base sheet application at the low point of the roof with appropriate roll width to offset side laps 18" (45.72 cm) from side laps of base sheet. Install flush to roof edge if over base sheet, otherwise turn the base sheet over the fascia avminimum 2" (5.08 cm) and nail 8" (20.32 cm) o.c.. For perimeter flashing details you must extend the base sheet up to a minimum of 8" (20.32 cm). Design layout so that no side laps are against the flow of water.

Note: On smaller roofs, cut rolls into manageable lengths.

(c) Cap Sheet Installation

1. Before installing the cap sheet, you must sweep or blow away any dust, dirt or debris off the base sheet, as this will interfere with adhesion.
2. Relax cap sheet prior to application no more than 18' (5.5 m) lengths. This will allow the sheet to sit down into the adhesive.
3. Snap chalk lines for area of application to prevent material from drying out in areas that material will not be applied immediately.

4. For the cap sheet, pour Green-Lock Plus Membrane Adhesive at a rate 2-2.5 gallons per 100 sq. ft. (0.82-1.02 l/m²) onto the base sheet.

Note: Once the membrane has been installed, check all seams for monolithic seal with no voids or openings. Ensure a 1/4" bleed-out is present and "sugar" in granules to bleed-out. If necessary, apply Green-Lock Plus Flashing Adhesive to seal any small un-bonded areas if they exist.

(d) Flashing Application

Green-Lock Plus Flashing Adhesive is ready to use immediately. Using the width of the roll as the maximum length of the flashing membrane, precut the flashing membrane pieces to the proper height, extending out onto the field of the roof a minimum of 6" (15.24 cm) for the base ply and 9" (22.86 cm) for the cap ply. All cutting shall be completed on a piece of plywood in order to prevent cutting the roof membrane. All flashing work shall start at the low point of the roof. The first flashing piece installed shall be one half the normal length of the flashing pieces in order to stagger the laps with the field membrane laps.

1. At all vertical and other flashing details, install one of the approved base sheets followed by one of the approved smooth or mineral cap sheets over the already installed field plies.
2. Using an 1/8" (3mm) notched trowel, apply Green-Lock Plus Flashing Adhesive to the substrate at a rate of 2-3 gal./100 sq. ft. (0.82-1.2 l/m²).
3. Extend flashing adhesive application onto the existing field plies a minimum of 6" (15.24 cm) for the base ply and 9" (22.86 cm) for the cap ply.
4. On a separate piece of plywood or base sheet, turn the precut flashing pieces "bottom side up." Trowel the Green-Lock Plus Flashing Adhesive at a rate of 2-3 gal./100 sq. ft. (0.82-1.21 l/m²) to the entire bottom of the flashing piece with a notched trowel, covering it completely.
5. Pick up the coated flashing membrane and press it into position. Apply hard pressure to the entire surface of the membrane, making sure all air pockets are removed and 100% contact with the substrate is obtained.
6. Once the membrane has been installed, check all seams for monolithic seal with no voids or openings. Ensure a 1/4" bleed-out is present and "sugar" granules into the bleed-out. If necessary, apply Green-Lock Plus Flashing Adhesive to seal any small un-bonded areas if they exist.
7. On all vertical laps, apply a minimum three course application of Green-Lock Plus Flashing Adhesive at a rate of 1/8-1/4" (3.175 - 6.35 mm) thick with GarMesh® reinforcement.
8. Install the termination bars/flashing details. Bleed out at all overlap edges should be visible to ensure complete contact. The flashing should be mechanically secured at the end of each work day.

Note: Application above is designed as a reference. Applicator needs to follow specific details contained in the approved project specifications.

(e) Top Coating/Overcoating

Newly installed membranes utilizing Green-Lock Plus should be allowed to cure for at least 30 days prior to installing any surfacing/coating. Depending on the surfacing specified, use primer as recommended by Garland.

(f) Flood Coat

1. Before installing the flood coat, you must sweep or blow away any dust, dirt or debris off the cap sheet, as this will interfere with adhesion.
2. Pour Green-Lock Plus Membrane Adhesive onto the cap sheet at a rate of 4-5 gallons per 100 sq. ft. (1.63-2.0 l/m²).
3. Broadcast 400 lbs. (181 kg) per 100 sq. ft. (9.29 ²) of gravel immediately into the Green-Lock Plus Membrane Adhesive.
4. Do not apply Green-Lock Plus Membrane Adhesive too far ahead without installing gravel into the adhesive, thus not allowing gravel to adhere properly.

WEATHER CONDITIONS

Do not attempt application if ice, snow, moisture or dew is present. Bonding substrates must be clean, dry and free of dust or other inhibitors of proper adhesion. Ambient temperature must be 50˚F (10˚C) and rising through the day. Cooler temperatures will negatively impact the properties of the system. Contact your Garland Sales Representative for proper cold weather applications.

When higher temperatures or humidity are present, Green-Lock Plus may skin over prematurely during application, making it difficult to achieve proper application rates and adhesion strength. Do not work beyond 5' of the roll and make sure to immediately install membrane.

STORAGE

Store pails and roll goods in their original packaging, indoors on pallets protected from the elements. Green-Lock Plus Adhesives need to be kept at 70˚F (21°C) for at least 24 hours prior to application. If stored on the roof, all product needs to be under a light-colored, breathable tarp at all times. Rolls and containers that are improperly stored or have been warehoused for prolonged periods of time could potentially be damaged or go beyond their shelf life.

The Garland Company, Inc.
Toll Free: 800-321-9336

Garland Canada Inc.
Toll Free: 800-387-5991