

TECHNICAL BULLETIN

FOR TARGET MARKET ROOFING



BUILDING TRUST



Subject: Blue Roofs

19-04

Blue roofs are roofs in which water is deliberately collected and accumulated in order to mitigate storm water runoff surge, or in the case of green roofs, to provide a more consistent supply of water for the plants. There is usually a device that regulates drainage which is for a set period of time depending on code requirements. Blue roofs can be exposed roofs, blue/green hybrid roofs, or paver roofs. For roofs with overburden (pavers or vegetative covers) there is a space created by a drainage layer of various thicknesses below the overburden where water can accumulate.

Blue roofs present a challenge because the accumulation of water creates a hydrostatic condition on the membrane. The smallest of breaches that may not be problematic when there is positive drainage can result in a substantial leak with these systems. Therefore, in order to be eligible for a warranty there are several technical requirements.

ACCEPTABLE SYSTEMS

Sarnafil® G 410, G 410 SA, G 476, G 476 SA membranes only, 72 mil minimum thickness.

Feltbacked membranes **CANNOT** be used in Blue Roof assemblies.

Waterproofing Assembly with Pavers and Pedestals (Plaza Deck) or Vegetative Cover (Green Roof):

- Conventionally Insulated Plaza Deck Assembly – Adhered membrane, use exposed roof assembly (see below). Vector Mapping Grid may be placed between the membrane the cover board.
- Waterproofing Protected Membrane Assembly – Sarnafil G 476 SA membrane. If insulation is installed above the membrane the designer must insure sufficient ballast or overburden is installed to counter the buoyancy of the polystyrene insulation installed above the membrane.

Exposed Roof Assembly:

- Sarnafil Membrane adhered with Sarnacol® 2121 or 2170 / 2170 VC adhesive, or Sarnafil G 410 SA
- High density (HD) polyisocyanurate roof board adhered with urethane adhesive
- Vector Mapping Grid (for EFVM® testing)
- Sarnatherm Coated Glass (CG) polyisocyanurate or XPS/ EPS (except if using Sarnacol 2170 / 2170 VC) insulation mechanically fastened or adhered with urethane adhesive (concrete deck)
- Vapor Retarder (optional)

Stipulations:

- All T-joints require patches
- No hand welding of field seams (except for starts /stops)
- No gypsum boards

- No organic faced polyisocyanurate boards
- Two widths of Sarnatred around all mechanical units (exposed roofs)
- Flash 8 inches above anticipated highest water level (8 inches above overburden for plaza decks and vegetative covers).
- Double up inside/outside corner details with pre-fabricated corners (install a normal inside/outside corner detail and then cover with a prefabricated corner – this is similar to waterproofing requirements).
- Electronic Leak Detection (ELD) testing is required or an active leak detection must be installed. Please refer to Revisions to Waterproofing Quality Assurance Requirements Technical Bulletin #03-12 for ELD requirements. No issuance of the warranty before the ELD testing has been completed. Prior to the test the roof must be flooded to a minimum depth of 2 inches for a minimum of 24 hours (naturally by rainfall or manually by hose) to increase the accuracy of the test.

NOTE: Filling the roof with water is done strictly to enhance the performance of the ELD test. It is not a “Flood test”, and is NOT an alternative to the mandatory ELD test requirement.

WARRANTY COVERAGE

- 20 year maximum coverage
- Maximum 99 mph warranty wind speed (exposed roofs only)
- Hybrid Blue/Green roofs are eligible for a Waterproofing System or Single-Source Warranty