

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, membranes only, 72 mil minimum thickness.

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

Assembly with Pavers and Pedestals (Plaza Deck):

- Conventionally Insulated Plaza Deck Assembly – Adhered membrane, use exposed roof assembly (see below). Vector Mapping Grid may be placed between the membrane and the cover board.

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)