



FOAMULAR® Extruded Polystyrene (XPS) Insulation Heat Build Up Due to Solar Exposure

Technical Bulletin

Managing Heat Build Up Due to Solar Exposure During Installation

IMPORTANT: FOAMULAR® extruded polystyrene (XPS) insulation, like all polystyrene insulation, is made from a thermoplastic resin. When it is placed under black/dark (non-white) materials, or in horizontal applications (such as under slab or roof deck) that may experience greater solar exposure than vertical applications, it may be damaged by heat build-up. Simple precautions taken during the construction process can minimize the potential for damage. **For all horizontal applications, always turn the print side down so the black print does not show to the sun and act as a solar collector, raising the temperature of the foam under the print.**

For under floor slabs, and above/ below grade walls

When installing black/dark (non-white) tapes and/or waterproofing/air barrier membranes over FOAMULAR® insulation, avoid prolonged sun exposure. Provide daily final finish covering or temporary white opaque covering over black/dark (non-white) surfaces to avoid possible damage.

For under floor slabs, ice rinks, on roof decks, and on other horizontal surfaces

When placing the board, turn the printed Foamular surface down so that the black lettering is not exposed to potential solar heat gain.

For roofing

Apply only as much FOAMULAR® insulation as can be covered by the finished roofing surface (overlayment, roof membrane and/or ballast) in the same day of installation to prevent its discoloration, wind displacement and possible damage from heat build-up by excessive sun exposure.

For ballasted roofing systems (including PRMA¹)

With no cover board over the XPS, black/dark (non-white) roofing membranes (or filtration fabrics in PRMA) over FOAMULAR® insulation must be ballasted immediately after placement to prevent potential heat damage from sun exposure and wind displacement of the insulation under the membrane/fabric.

For mechanically attached and fully adhered roofing systems

In areas where black/dark membranes are used and where “reflected solar energy” is expected to be present, FOAMULAR® insulation needs protection in addition to normally specified cover boards. For example, roof areas adjacent to higher walls, particularly walls with reflective surfaces, or near large rooftop HVAC units, or near or in between clusters of mechanical equipment, or near other structures with reflective cladding (metal or glass); or near higher reflective parapets, all such areas should be considered for additional heat protection. Such roof areas must be covered with pavers or ballast. Black/dark (non-white) membranes must be coated with white reflective topping, and maintained white, to avoid damage due to the intensified heat exposure from reflected sun in such areas.

For more details, please refer to current literature or contact the local FOAMULAR® insulation sales representative.

Notes

1. PRMA, Protected Roof Membrane Assemblies

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OWENS CORNING FOAM INSULATION, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO 43659

1-800-GET-PINK®
www.owenscorning.com

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