

Product Information Bulletin 319

FM Approved Roof Assemblies

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INTRODUCTION

Plasti-Fab EPS insulation manufactured with either Styropek or NOVA expandable polystyrene has been evaluated by FM Approvals, the certification and testing service of FM Global, and at the time of this publication is listed as an approved insulation component in a multitude of FM approved roof assemblies. All FM approved roof assemblies have been evaluated for performance criteria that include interior fire exposure, exterior fire exposure, wind uplift resistance, corrosion resistance for roof fasteners, accelerated weathering, hail damage resistance, leakage resistance and foot traffic resistance.

FM 4450 Approval Standard for Class 1 Insulated Steel Deck Roofs

This standard provides FM Approvals requirements for the Approval of Class 1 insulated steel roof decks. A Class 1 insulated steel roof deck is one which meets the criteria of FM 4450 for fire, wind uplift, live load resistances, corrosion of metal parts, and fatigue of plastic parts. The performance of an insulated steel deck roof depends in part on all components in the roof system makeup, and on how they interact. It is therefore necessary to evaluate the roof assembly as a whole when measuring the fire spread potential on the underside of the roof and/or its windstorm resistance classification.

Class 1 Insulated Steel Deck Roofs are usually comprised of steel deck, insulation, and roof covering. They are often constructed by first securing rigid insulation board to the top surface of the deck with insulation fasteners. A weatherproof covering is then installed above the insulation. When a vapor retarder is needed, it can be placed directly on the deck with fasteners driven through the insulation and retarder, or in conjunction with a sandwich-style construction, i.e., adhered over insulation board which has been attached to the steel deck with insulation fasteners prior to applying a second layer of insulation. All materials within the installation must meet all criteria required of that category.

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Design professionals who will be specifying FM approved roof assemblies can utilize the tools made available on FM Approval's web site **RoofNav**^{®1} (www.roofnav.com). RoofNav includes the complete collection of FM approved roof products and assemblies, pertinent FM Data Sheets and Standards, useful background information and a glossary of terms.

¹ RoofNav is a registered trademark of FM Approvals LLC.

The roof assemblies within RoofNav are FM approved only when assembled as listed for each specific cover, insulation, fastener, deck or structural substrate. Their compatibility with other roofing components within the construction is the responsibility of the listed manufacturer, who should be consulted prior to their use. Their performance is extremely dependent upon the substrate to which the system is attached or anchored.

It is impractical to list all of the FM approved assemblies in which **Plasti-Fab** EPS insulation can be used. For a complete listing of roof assemblies refer to the RoofNav website. RoofNav has extensive tools for searching for approved products and assemblies. Contact **Plasti-Fab** technical services if you need assistance regarding FM approved products and roof assemblies.

Plasti-Fab EPS insulation products in the table below are listed as an insulation component in FM approved assemblies conforming to **FM Approval Standard 4450**.

Insulation Product	Approved Use
EPS (1.0 pcf, Nova Expandable Polystyrene)	Insulation (Board Stock)
EPS (1.0 pcf, Nova Expandable Polystyrene) (Tapered)	Insulation (Board Stock)
EPS (1.0 pcf, Styropek)	Insulation (Board Stock)
EPS (1.0 pcf, Styropek) (Tapered)	Insulation (Board Stock)
EPS (1.25 pcf, Nova Expandable Polystyrene)	Insulation (Board Stock)
EPS (1.25 pcf, Nova Expandable Polystyrene) (Tapered)	Insulation (Board Stock)
EPS (1.25 pcf, Styropek)	Insulation (Board Stock)
EPS (1.25 pcf, Styropek) (Tapered)	Insulation (Board Stock)
EPS Composite (1.0 pcf, Styropek)	Insulation (Board Stock)
EPS Composite (1.25 pcf, Styropek)	Insulation (Board Stock)