

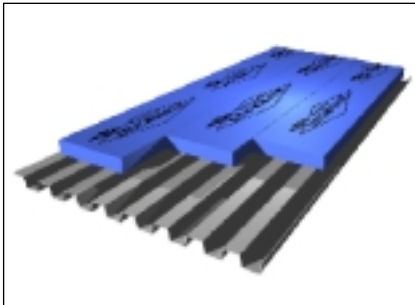


STYROFOAM DECKMATE & DECKMATE Plus Brand Insulation

Installation of Insulation Direct to Roof Decks

Team Up With A Leader

The Dow Chemical Company has gained Underwriters Laboratory, BOCA ES, SBCCI ES & PST and ICBO ES acceptance for the use of STYROFOAM* DECKMATE* and STYROFOAM DECKMATE Plus brand extruded polystyrene insulation for placement directly on steel roof decks eliminating the need for expensive and labor-intensive thermal barriers. In addition the new International Building Code (IBC) directly references the test procedure used to gain UL Approval. The specific details of each acceptance vary between the above mentioned groups and this application information data sheet describes each.



ICBO ES Code Acceptance

The International Conference of Building Officials (ICBO) Evaluation Services has accepted the use of STYROFOAM DECKMATE and STYROFOAM DECKMATE Plus brand insulations for use directly on steel roof decks. Specific details of the ICBO ES acceptance are as follows:

- Maximum insulation thickness: 6 inches,
- Accepted Membranes: Any ICBO approved EPDM or thermoplastic single-ply (45 mil thick),
- Assemblies: Ballasted, mechanically attached, or adhered assemblies,

- Steel Deck: Minimum 22 gauge, non-perforated with flutes spaced a maximum of 6 inches on center,
- Coverboards: Nominal 1/4" thick Dens-Deck® or 1/2" thick wood fiberboard are approved,
- Building must be equipped with a wet-pipe sprinkler system,
- Informational placards must be placed at roof entry points to notify roofing contractor that re-roofing limitations exist, and
- Re-roofing applications are subject to limitations.

For more information, consult ICBO ES report 5155.

Factory Mutual Approval

Large Scale Testing conducted in accordance with Factory Mutual Test Standard 4880 has led to approval for the installation of STYROFOAM DECKMATE and STYROFOAM DECKMATE Plus brand insulations directly on steel roof decks. The testing program was jointly funded by The Dow Chemical Company and Owens Corning. The specific details of the Approval follow:

- The building must have either a wet pipe or dry pipe sprinkler system. The sprinkler system must be designed for a minimum water density of 0.2 gpm/ft².
- A maximum extruded polystyrene foam thickness of 10 inches is allowed.
- The system can be installed with or without coverboards. If coverboards are used they must be FM Approved materials.
- Approved Membranes: FM Approved single-ply membranes.
- Any FM Approved Class 1 wall panel is allowed (this also includes non-combustible walls such as drywall).
- Maximum ceiling height is 30 feet.

- This approval only applies to buildings which do not have drop ceilings.

BOCA ES Code Acceptance

The Building Officials & Code Administrators (BOCA) Evaluation Services, Inc. has accepted the use of STYROFOAM DECKMATE and STYROFOAM DECKMATE Plus brand insulations for use directly on steel roof decks. Specific details of the BOCA ES acceptance are as follows:

- Maximum insulation thickness: 10 inches without a coverboard; 8 inches with a coverboard.
- Accepted Membranes: EPDM, TPO or PVC single-ply membranes as described in Underwriters Laboratories Inc. Roofing Materials and Systems Directory.
- Assemblies: Ballasted, mechanically attached, or adhered assemblies.
- Steel Deck: Minimum 22 gauge, non-perforated with flutes spaced a maximum of 6 inches on center.
- Coverboards: Nominal 1/4" thick Dens-Deck®, 1/2" thick wood fiberboard or 3/4" thick perlite are approved.

For more information, consult BOCA ES report 2102.

SBCCI PST&ESI Code Acceptance

The Southern Building Code Congress International, Inc. (SBCCI) Product Safety Testing and Evaluation Services, Inc. has accepted the use of STYROFOAM DECKMATE and STYROFOAM DECKMATE Plus brand insulations for use directly on steel roof decks. Specific details of the SBCCI PST&ESI acceptance are as follows:

- Maximum insulation thickness: 8 inches.

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- Accepted Membranes: Maximum 0.08 inch thick roof covering classified by Underwriters Laboratories Inc. as a membrane for Roofing Systems (TGFU) as described in the Roofing Materials and Systems Directory. In lieu of the roof covering described above a mechanically fastened metal roof deck panel assembly may be installed. See Metal Roof Deck Panels (TGFU).
- Assemblies: Ballasted, mechanically attached, or adhered assemblies.
- Steel Deck: Minimum 22 gauge, non-perforated with flutes spaced a maximum of 6 inches on center.
- Coverboards: Nominal 1/4" thick glass-mat-faced, silicon treated gypsum core panel, 1/2" thick wood fiberboard, 3/4" thick perlite or 1/2" thick gypsum board are approved.

For more information, consult SBCCI PST&ESI report 9576C.

Underwriters Laboratories, Inc. (UL) Approval

Large scale fire testing conducted in accordance with UL1256 has led to approval for the installation of STYROFOAM DECKMATE and STYROFOAM DECKMATE Plus brand insulations directly on steel roof decks. The Dow Chemical Company jointly funded the testing

program with other manufacturers of both extruded and molded polystyrene foams. The approvals for STYROFOAM brand insulation are shown in the Roofing Materials & Systems Directory published by UL. The specific details of the Approvals follow:

UL 260

- Maximum insulation thickness: 10 inches.
- Accepted Membranes: Any EPDM, PVC, TPO, CSPE, CPE roof covering classified by Underwriters Laboratories Inc. as a membrane for Roofing. Systems (TGFU) as described in the Roofing Materials and Systems Directory.
- Assemblies: Ballasted.
- Steel Deck: Minimum 22 gauge, non-perforated with flutes spaced a maximum of 6 inches on center.

UL440

- Maximum insulation thickness: 10 inches without a coverboard; 8 inches with a coverboard.
- Accepted Membranes: Maximum 0.08 inch thick roof covering classified by Underwriters Laboratories Inc. as a membrane for Roofing Systems (TGFU) as described in the Roofing Materials and Systems Directory. In lieu of the roof covering described above

a mechanically fastened metal roof deck panel assembly may be installed. See Metal Roof Deck Panels (TGFU).

- Assemblies: Mechanically attached or adhered.
- Steel Deck: Minimum 22 gauge, non-perforated with flutes spaced a maximum of 6 inches on center.
- Coverboards: Nominal 1/4" thick Dens-Deck®, 1/2" thick wood fiberboard, 3/4" thick perlite or 1/2" thick gypsum board are approved.

The Only Roof Insulation You Will Ever Need

Best of all, STYROFOAM DECKMATE and STYROFOAM DECKMATE Plus deliver all the advantages of closed cell STYROFOAM brand products, from superior moisture resistance and R-value retention to outstanding durability, reusability and versatility. These and other characteristics allow STYROFOAM DECKMATE and STYROFOAM DECKMATE Plus to outperform traditional insulating products in most key properties. Competitive pricing and installation costs, combined with superior long-term performance, make STYROFOAM DECKMATE and STYROFOAM DECKMATE Plus attractive, cost effective choices to specifiers and owners alike.

NOTICE: STYROFOAM brand insulation is combustible and should be protected from flame and other high heat sources. It should be installed with code-acceptable thermal barriers or used in approved alternative constructions. For more information, contact Dow (1-800-441-4369).

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Published June 2001.

**For Technical Information:
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