FlintBoard™ roof insulation products from CertainTeed are proven energy-efficient systems. Available in a variety of thicknesses, FlintBoard features long-term thermal resistance (LTTR) values from 6.0 to 25.0. FlintBoard reduces energy demands and is compatible with most roofing membranes.

**Performance**
All FlintBoard products are manufactured with closed-cell polyiso, which assures:

- Dimensional stability for years of performance
- High R-values per inch for maximum energy efficiency
- Superior ratings in fire safety performance
- Less weight for easy handling and installation

**Adaptability**
CertainTeed polyiso roof insulation systems are engineered for use with:

- Built-up roofing systems
- Modified bitumen roofing systems
- Single ply systems
- Shingles
- Tile
- Slate

**Versatility**
There’s a FlintBoard insulation product suitable for the following uses:

- Insulation for cold storage and metal building applications
- Positive drainage tapered systems
- Composite polyiso systems (available with perlite, high-density wood fiberboard or DensDeck®), which eliminates the need for cover boards and reduces installation labor
- CertainTeed FlintBoard ISO Roof Insulation products are environmentally sensitive and available for virtually every type of construction system

Tapered design services are also available from the CertainTeed team of professionals, who will assist in tapered system design, shop drawings and technical support (see page 12).
FlintBoard ISO Polyisocyanurate Roof Insulation features a closed-cell polyiso core integrally laminated to heavy, black (non-asphaltic), fiber-reinforced felt facers. FlintBoard ISO is marked on one side for use with hot applied systems and is unmarked on the opposite side for use with single ply systems, making this a universally adaptable product suitable for a variety of applications. FlintBoard ISO is also available in 25-psi formula.

FlintBoard ISO is specifically recommended for hot asphalt or coal tar BUR, modified bitumen, metal and single-ply membrane systems. It is available in a variety of thicknesses, in 4' x 4' or 4' x 8' panels.

FlintBoard ISO is the recommended roof insulation in conjunction with CertainTeed Commercial Roofing Systems including Flintlastic® Roof Systems.

ISO
Polyisocyanurate Roof Insulation

- ASTM C1289, Type II, Class 1
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foam Flammability Criteria
- IBC, NBC, UBC, and SBC Sections on Foam Insulation (Chapter 26)
- NYC-MEAI

FM Approval Standard 4450/4470
FlintBoard ISO is approved for Class 1 insulated steel, wood, concrete and gypsum roof deck construction for 1-60 and 1-90 Windstorm Classifications. Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification
Insulated metal deck construction assemblies – Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification
Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

UL Standard 263 Fire Resistance Classification (ASTM E119)

UL Standard 1897 Wind Uplift Resistance 120 PSF, 150 PSF, 165 PSF, 245 PSF

UL Certified for Canada

UL of Canada
ISO-T
Tapered Polyisocyanurate Roof Insulation

FlintBoard ISO-T Tapered Polyisocyanurate Roof Insulation is manufactured in a tapered profile to offer the combination of high thermal value plus promotion of proper roof drainage.

FlintBoard ISO-T tapered polyiso roof insulation is specifically recommended for hot asphalt, coal tar BUR, modified bitumen and single-ply membrane roofing systems. FlintBoard ISO-T is also available in 25-psi formula. It is produced in a variety of thicknesses, in 4' x 4' panels only.

- ASTM C1289, Type II, Class 1
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foam Flammability Criteria
- IBC, NBC, UBC, and SBC Sections on Foam Insulation (Chapter 26)

FM Approval Standard 4450/4470
FlintBoard ISO-T is approved for Class 1 insulated steel, wood, concrete and gypsum roof deck construction for 1-60 and 1-90 Windstorm Classifications. Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification
Insulated metal deck construction assemblies – Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification
Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

UL Standard 263 Fire Resistance Classification (ASTM E119)

UL Certified for Canada

UL of Canada
ISO Cold
Polyisocyanurate Roof Insulation

- ASTM C1299, Type II, Class 1
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foil Flammability Criteria
- IBC, BOCA, ICBO, and SBCCI Sections on Foam Insulation (Chapter 26)

**FM Approval Standard 4450/4470**
FlintBoard ISO Cold is approved for Class 1 insulated steel, wood, concrete and gypsum roof deck construction for 1-60 and 1-90 Windstorm Classifications. Refer to FM Approvals RoofNav for details on specific systems.

**UL Standard 1256 Classification**
Insulated metal deck construction assemblies – Construction #120 and #123.

**UL Standard 790 (ASTM E108) Classification**
Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

**UL Standard 263 Fire Resistance Classification (ASTM E119)**

**UL Certified for Canada**
ISO-T Cold
Tapered Polyisocyanurate Roof Insulation

- ASTM C1289, Type II
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foam Flammability Criteria
- IBC, NBC, UBC and SBC Sections on Foam Insulation (Chapter 26)
- State of Florida Product Approval #FL491

**FM Approval Standard 4450/4470**
FlintBoard ISO-T Cold is approved for Class 1 insulated steel, wood, concrete and gypsum roof deck construction for 1-60 and 1-90 Windstorm Classifications. Refer to FM Approvals RoofNav Guide for details on specific systems.

**UL Standard 1256 Classification**
Insulated metal deck construction assemblies, Construction #120 and #123.

**UL Standard 790 (ASTM E108) Classification**
Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

**UL Standard 263 Fire Resistance Classification (ASTM E119)**

**UL Certified for Canada**
ISO Plus

Polyisocyanurate Composite Roof Insulation With Laminate Perlite

- ASTM C1289, Type III
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foam Flammability Criteria
- IBC, NBC, UBC, SBC Sections on Foam Insulation

FM Approval Standard 4450/4470
FlintBoard ISO Plus is approved for Class 1 insulated steel, wood, concrete and gypsum roof deck construction for 1-60 and 1-90 Windstorm Classifications. (May be mopped or mechanically fastened to cast-in-place structural concrete roof decks.) Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification
Insulated metal deck construction assemblies, Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification
Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

UL Standard 263 Fire Resistance Classification (ASTM E119)

ISO-T Plus

Tapered Polyisocyanurate Composite Roof Insulation With Laminate Perlite

FlintBoard ISO-T Plus Tapered Polyisocyanurate Composite Roof Insulation is manufactured in a tapered profile to offer the combination of high thermal value plus promotion of proper roof drainage.

FlintBoard ISO-T Plus is available in a variety of thicknesses, in 4' x 4' panel sizes only.
ISO WF

Composite Polyisocyanurate Wood Fiberboard Roof Insulation

- ASTM C1289, Type IV
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foam Flammability Criteria
- IBC, NBC, UBC, SBC Sections on Foam Insulation (Chapter 26)
- State of Florida Product Approval #FL491

FM Approval Standard 4450/4470
FlintBoard ISO WF is approved for Class 1 insulated steel, wood, concrete and gypsum roof deck construction for 1-60 and 1-90 Windstorm Classifications. (May be mopped or mechanically fastened to cast-in-place structural concrete roof decks.) Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification
Insulated metal deck construction assemblies - Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification
Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

UL Standard 263 Fire Resistance Classification (ASTM E119)
See UL Fire Resistance Directory for updated listings.

ISO-T WF

Tapered Composite Polyisocyanurate Wood Fiberboard Roof Insulation

FlintBoard ISO-T WF is offered in a variety of thicknesses, providing average long-term thermal resistance (LTTR) values from 5.8 to 15.0. Higher LTTR values can be achieved with layers of flat FlintBoard ISO. Available in 4' x 4' panels only.
ISO DD

Composite Polyisocyanurate DensDeck®
Roof Insulation

- ASTM C1289, Type VII
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25
  Foam Flammability Criteria
- IBC, NBC, UBC, SBC Sections on Foam Insulation (Chapter 26)
- State of Florida Product Approval #FL491

FM Approval Standard 4450/4470
FlintBoard ISO DD is approved for Class 1 insulated steel, wood, concrete and
gypsum roof deck construction for 1-60 and 1-90 Windstorm Classifications.
Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification
Insulated metal deck construction assemblies – Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification
Class A with most roof membrane systems. See UL Roofing Materials &
Systems Directory.

UL Standard 263 Fire Resistance Classification (ASTM E119)
Some classifications for fire resistance are P230, P259, P508, P510, P514, P710,
for updated listings.

Rigid board insulation for hot asphalt
BUR, modified bitumen and single-ply
roofing systems.

Consult membrane manufacturer for
suitability and system requirements.

FlintBoard ISO DD Composite
Polyisocyanurate/DensDeck Roof
Insulation features a closed-cell
polyiso core bonded to 1/4" DensDeck
Prime with a fiber-reinforced felt facer
on the bottom side. The DensDeck
top makes FlintBoard ISO DD a good
choice where foot traffic is a concern.

FlintBoard ISO DD is offered in a
variety of thicknesses, providing
long-term thermal resistance (LTTR)
values from 6.3 to 23.3. Available in
4' x 4' and 4' x 8' panels.

FlintBoard ISO DD is a
recommended roof insulation
in conjunction with CertainTeed
Commercial Roofing Systems
including Flintlastic Roof Systems.
ISO F

Polyisocyanurate Roof Insulation Bonded to Trilamine Foil

- ASTM C1269, Type I, Class 1, Grade 2 (20 psi) or Grade 3 (25 psi)
- Miami-Dade County, Florida
- IBC, NBC, UBC, SBC Sections on Foam Insulation
- State of Florida Product Approval

FM Approval Standard 4450/4470

FlintBoard ISO F is approved for Class 1 insulated steel roof deck construction for both 1-60 and 1-90 Windstorm Classifications. Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification

Insulated metal deck construction assemblies – Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification

Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

UL Standard 263 Fire Resistance Classification (ASTM E119)


UL Certified for Canada
ISO NB
Composite Polyisocyanurate OSB Roof Insulation

- ASTM C1289, Type V
- Miami-Dade County, Florida
- IBC, NBC, UBC, SBC Sections on Foam Insulation
- State of Florida Product Approval #FL491

FM Approval Standard 4450/4470
FlintBoard ISO NB is approved for Class 1 insulated roof deck construction. Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification
Insulated metal deck construction assemblies – Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification
Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

UL Standard 263 Fire Resistance Classification (ASTM E119)

Rigid board insulation for use with heavyweight shingles, standing seam metal, tile, slate and single-ply roofing systems.

FlintBoard ISO NB Composite Polyisocyanurate/OSB Roof Insulation features a closed-cell polyiso core bonded to either 7/16" or 5/8" OSB with a fiber-reinforced felt facer on the bottom side. FlintBoard ISO NB is also available bonded to plywood (CDX and fire-treated available in 5/8" or 3/4") upon request.

FlintBoard ISO NB is offered in a variety of thicknesses, providing long-term thermal resistance (LTTR) values from 6.6 to 28.7. Available in 4' x 4' and 4' x 8' panels.

FlintBoard ISO NB is a recommended roof insulation in conjunction with CertainTeed Roofing Systems.
Rigid board insulation specifically for use over sloped unventilated roof decks.

FlintBoard CV Polysocyanurate Roof Insulation is designed to provide thermally efficient insulation with uniform cross venting that promotes the air circulation required by many shingle manufacturers. FlintBoard CV allows heat to dissipate while providing a nailable surface and efficient insulation in a one-step process.

FlintBoard CV is offered in a variety of thicknesses and consists of a thermally efficient polyiso insulation board with 1.0", 1.5" or 2.0" ventilation channels separating APA/TECO rated OSB or plywood from the polyiso foam insulation to create a cross ventilating airspace. FlintBoard CV is made to order in 4' x 8' size panels and in nominal thicknesses of 2.5" to 6.5". Non-standard vent spaces are available on special order.

CV

Cross Ventilating Polysocyanurate Roof Insulation

- ASTM C1289, Type II
- IBC, NBC, UBC, and SBC sections on foam plastic insulation (Chapter 26)
- State of Florida Product Approval
- Miami-Dade County, Florida #FL491

FM Approval Standard 4450/4470
FlintBoard CV is approved for Class 1 insulated steel, wood, concrete and gypsum roof deck construction for both 1-60 and 1-90 Windstorm Classifications (may be mopped or mechanically fastened to concrete roof deck). Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification
Insulated metal deck construction assemblies – Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification
For use with Class A, B or C shingles, metal or tile roof coverings.

UL Standard 263 Fire Resistance Classification (ASTM E119)
See UL Fire Resistance Directory for updated listings.

UL Certified for Canada
Pre-Cut Crickets
Pre-Cut Polyisocyanurate Roof Crickets

- ASTM C1289, Type II, Class 1 (FlintBoard ISO-T)
- Metro-Dade County, Florida
- California State Insulation Quality Standards and Title 25 Foam Flammability Criteria
- IBC, NBC, UBC, and SBC Sections on Foam Insulation (Chapter 26)
- Meets CAN/CGSB Standards

FM Approval Standard 4450/4470
Tapered FlintBoard ISO-T is approved for Class 1 insulated steel, wood, concrete and gypsum roof deck construction for 1-60 and 1-90 Windstorm Classifications. Refer to FM Approvals RoofNav for details on specific systems.

UL Standard 1256 Classification
Insulated metal deck construction assemblies – Construction #120 and #123.

UL Standard 790 (ASTM E108) Classification
Class A with most roof membrane systems. See UL Roofing Materials & Systems Directory.

UL Standard 263 Fire Resistance Classification (ASTM E119)

UL of Canada
Insulated Roof Deck Assemblies - Construction #C34. Meets CAN/ULC-S126-M86.
Tapered Design Services

The CertainTeed Tapered Insulation Department includes a team of professionals who specialize in providing estimates based on individual designs, as well as offering takeoff, technical and design services.

State-of-the-art equipment allows the Tapered Insulation Department to engineer tapered projects accurately and quickly. CertainTeed specialists can remove complications from the bid process and are ready to respond to any tapered roof insulation need.

FlintBoard ISO-T tapered 4' x 4' panels are very easy to install. Each board is appropriately marked to indicate the low point, and each insulation bundle is carefully identified to correspond with take-off drawings and assure proper identification.

CertainTeed offers FlintBoard ISO-T tapered products in the most popular and efficient slopes of 1/8", 1/4" and 1/2" per foot systems; however, other slopes can be provided on a special order basis.

FlintBoard ISO-T tapered polyiso insulation is also available in 25-psi formula.

![Diagram of cross-sections]
Product Installation

General Installation Instructions
Before installation begins, the roof deck must be firm, well attached, even, clean and dry. Proper attachment of the insulation is necessary to prevent roof failures. CertainTeed will not be responsible for any damage caused by improper attachment. FlintBoard Polyisocyanurate Roof Insulation products can be attached to decks that are approved by Factory Mutual and local codes. CertainTeed is not responsible for determining the suitability of the deck.

FlintBoard products shall be kept dry before, during and after installation. Install only as much FlintBoard products as can be covered the same day with completed roofing.

Although FlintBoard has been designed to withstand normal foot traffic, protection from damage by construction traffic and/or other abuse is extremely important. Roof surface protection such as plywood must be used in areas where storage and staging are planned and heavy or repeated traffic is anticipated during or after installation.

Refer to CertainTeed Technical Bulletin CT-ISO-08-02.

Vapor/Air Retarders
Moisture vapor tends to migrate from warmer to cooler areas. In building construction, vapor/air retarders are used to inhibit or block the passage of warm moisture-laden air into walls or roofing assemblies. To determine whether a vapor/air retarder is necessary, calculations based on interior relative humidity, interior temperature, and outside design temperature must be performed. Consult the NRCA Roofing Manual: Membrane Roofing Systems for more information regarding vapor/air retarders and dew point calculations.

Special consideration should be given to construction-generated moisture as well. For example, construction-generated moisture will be released when concrete floor slabs are placed after the roof has been installed, which can drive large quantities of moisture into the roof system. Therefore, CertainTeed is not responsible for damage to the insulation when exposed to construction-generated moisture or from moisture released from building materials. Refer to the NRCA Roofing Manual: Membrane Roofing Systems for recommendations for the use of a vapor retarder when construction-generated moisture is present. Refer to CertainTeed Technical Bulletin CT-ISO-08-02. Consult vapor/air retarder manufacturer for recommended applications and details.
Product Installation (continued)

Multi-Layer Application of Insulation

In compliance with industry standards, two-layer application of FlintBoard is specified by CertainTeed. The joints in each layer should be offset in order to avoid a vertically continuous joint through the total insulation thickness.

Two layers (or more) with joints staggered can provide improved insulation performance by eliminating thermal bridges. This method also reduces condensation potential and thermal stress on the roof membrane.

Refer to CertainTeed Technical Bulletin CT-ISO-08-02. CertainTeed recommends a maximum 2.7" thick top layer (see illustration at left).

With many roofing systems, the industry standard or the membrane manufacturer mandates use of a separation layer or coverboard over the first layer of polyisocyanurate roof insulation prior to installation of the roofing membrane. Consult CertainTeed for recommendations regarding coverboard requirements. The use of a coverboard may change the fastening requirements or fire/wind ratings.

When installing any FlintBoard product, care should be taken to ensure that joints are placed solidly on the bearing surface of the roof decking.

Mechanical Attachment

Mechanical fastening is the recommended method of attachment over nailable decks. Fastener frequency and spacing for steel, wood, concrete and poured gypsum decks are covered in the current CertainTeed Commercial Roof Systems Specification Manual according to the membrane system.

Refer to FM Loss Prevention Data Sheet 1-29 for special considerations regarding perimeter and corners of the roof. For proper attachment of insulation to lightweight insulating concrete decks or poured gypsum concrete decks, follow the instructions outlined in the NRCA Roofing and Waterproofing Manual.

FlintBoard products must not be adhered directly to these decks by any bitumen or adhesive attachment method.
Product Installation (continued)

BUR and Modified Bitumen Systems
FlintBoard ISO, FlintBoard ISO Cold, FlintBoard ISO WF, FlintBoard ISO Plus, FlintBoard ISO-T and FlintBoard ISO-T Plus roof insulations are used in BUR and modified bitumen membrane systems. Do not torch apply modified bitumen systems directly to any FlintBoard product. Membranes may be hot mopped directly to the perlite side of FlintBoard ISO Plus or fiberboard side of FlintBoard ISO WF. When using FlintBoard ISO or FlintBoard ISO Cold, a separation layer is recommended.

Separation Layer: The use of a separation layer means that FlintBoard ISO is covered with one of the following prior to membrane application:

- A separate layer of FlintBoard ISO Plus Roof Insulation or FlintBoard ISO-T Plus applied using hot asphalt
- A CertainTeed-approved fiberboard, minimum 1/2" perlite board, glass or mineral fiberboard, applied using hot asphalt

For nailable substrates, the first layer of FlintBoard Roof Insulation must be attached with FM approved fasteners in accordance with the fastening patterns indicated.

Notes:
1. Minimum thickness of insulation shall be 1.3" FlintBoard ISO with mopped 0.5" FM approved perlite overlay
2. Minimum thickness of insulation shall be 1.5" FlintBoard ISO with mopped 0.5" FM approved high density wood fiber overlay
3. Minimum thickness shall be 1.5" when using FlintBoard ISO Plus
4. Minimum thickness shall be 2.0" when using FlintBoard ISO WF
5. See Factory Mutual Approval Guide for approved fasteners/plates
6. FM 1-90 fastening pattern
7. Refer to FM Loss Prevention Data Sheet 1-29 or consult the roof system manufacturer for perimeter and corner enhancement recommendations.
Product Installation (continued)

Bitumen Attachment
For installing FlintBoard ISO, FlintBoard ISO Plus and FlintBoard ISO-T to a structural concrete deck, bitumen attachment is the recommended method. When using asphalt on concrete decks, priming of the deck with a CertainTeed-approved primer is necessary. Precautions must be taken to prevent bitumen drippage.

When using hot-applied bitumen for attachment, the deck must be dry and care must be taken to apply the bitumen in sufficient quantity to totally cover the available deck surface. Use of 18 to 30 pounds of bitumen per square foot is recommended to ensure proper attachment. To ensure embedment, the board must also be “stepped in” at several points while the bitumen is still hot enough to allow positive attachment.

The recommended FlintBoard insulation size for hot asphalt attachment is 4’ x 4’. Because of the unevenness of structural concrete decks, 4’ x 8’ boards are not recommended for bitumen attachment to the deck. However, 4’ x 8’ boards may be mechanically fastened.

For plywood decks, taping of the joints of the first mechanically attached layer of insulation boards is recommended prior to hot asphalt application of the second layer.

Bitumen Temperature
The bitumen should be applied at the Equiviscous Temperature (EVT) ±25°F.

The bitumen used must have a temperature no higher than 390°F at the point of contact with FlintBoard products.

Limitation of Liability
CertainTeed hereby expressly disclaims any and all representations and warranties regarding Flintboard, expressed or implied, including, without limitation, the implied warranties of merchantability and fitness for a particular purpose.

In no event shall CertainTeed be liable for consequential or incidental damages of any kind. Some states do not allow exclusions or limitations of incidental or consequential damages, so the above limitations and exclusions may not apply to you.