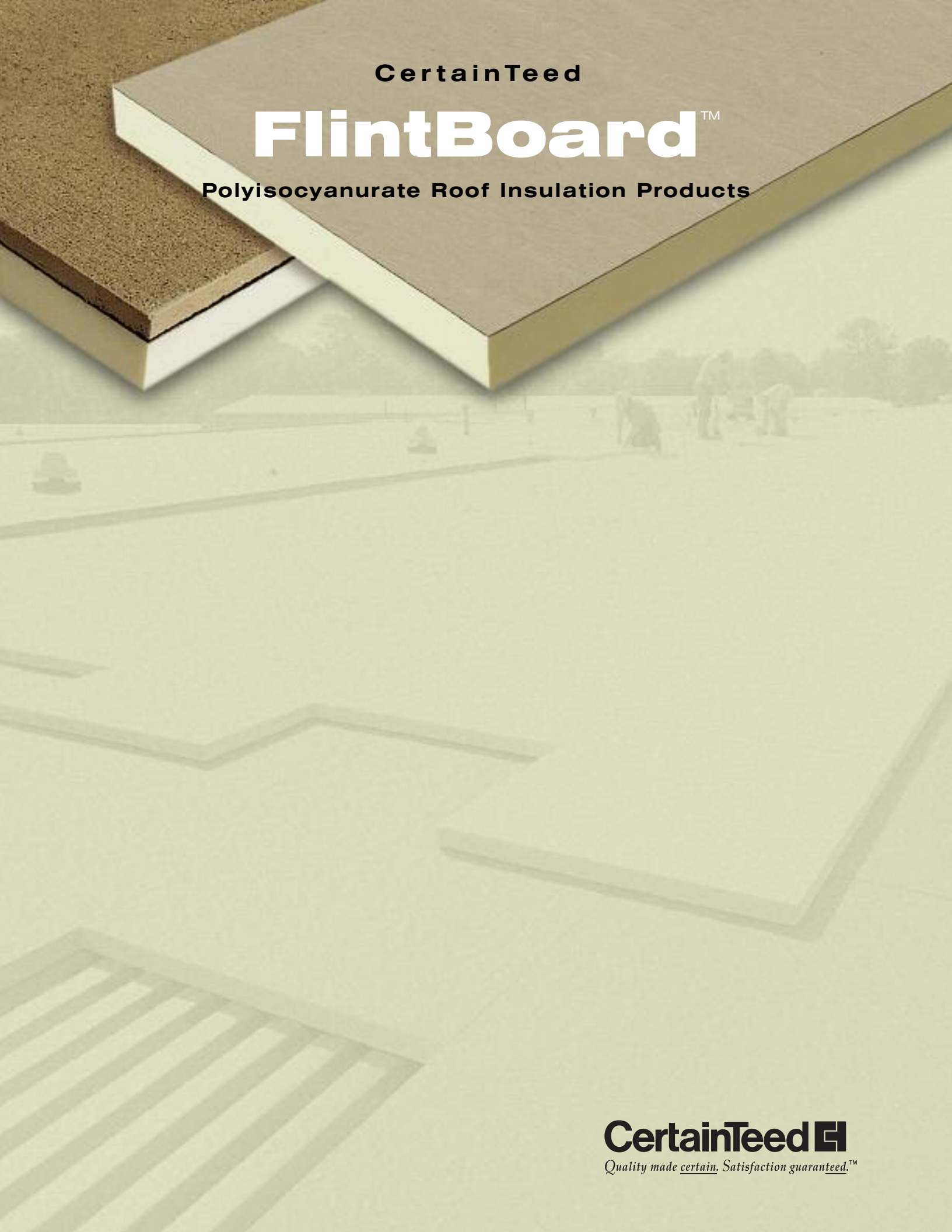


**CertainTeed**

# **FlintBoard™**

**Polyisocyanurate Roof Insulation Products**



**CertainTeed**   
*Quality made certain. Satisfaction guaranteed.™*

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 13)



# **ISO**

## Polyisocyanurate Roof Insulation

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.

### **FlintBoard ISO Compliances**

- ASTM C1289, Type II, Class 1
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foam Flammability Criteria
- IBC, BOCA, ICBO, and SBCCI Sections on Foam Insulation (Chapter 26).
- CCMC
- Meets CAN/CGSB-51.26-M86. Meets CAN/ULC-S704
- NYC-MEA

### **FM Approval Standard 4450/4470**

FlintBoard ISO 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 Construction #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 P225, P230, P259, P508, P510, P514, P519, P701, P710, P713, P717, P718, P719, P720, P722, P723, P724, P725, P727, P728, P729, P730, P732, P734, P735, P739, P801, P814, P815, P818, P819, P828 and P832. See UL Fire Resistance Directory for updated listings.

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

### **UL Certified for Canada**

#### **UL of Canada**

Insulated Roof Deck Assemblies Construction #C34. Meets CAN/ULC-S126-M86, CAN/ULC-S101-M89, and CAN/ULC-S107-M87 criteria.



## **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; 4' x 4' panels only.

#### **FlintBoard ISO-T Compliances**

- ASTM C1289, Type II, Class 1
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foam Flammability Criteria
- IBC, BOCA, ICBO, and SBCCI Sections on Foam Insulation (Chapter 26)
- CCMC
- Meets CAN/CGSB-51.26-M86. Meets CAN/ULC-S704, CAN/ ULC-S770

#### **FM Approval Standard 4450/4470**

FlintBoard ISO-T 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**

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 P225, P230, P259, P508, P510, P514, P701, P710, P713, P717, P718, P719, P720, P722, P723, P724, P725, P727, P728, P729, P730, P732, P801, P814, P815, P818, P819, and P828. See UL Fire Resistance Directory for updated listings.

#### **UL Certified for Canada**

##### **UL of Canada**

Insulated Roof Deck Assemblies Construction #C34. Meets CAN/ULC-S126-M86, CAN/ULC-S101-M89 and CAN/ULC-S107-M87 criteria.



## **ISO Cold**

### Polyisocyanurate Roof Insulation

FlintBoard ISO Cold Polyisocyanurate Roof Insulation features a closed-cell polyiso core with integrally laminated heavy, coated glass facers. FlintBoard ISO Cold has been specifically engineered with a more durable facer and higher dimensional stability for use with roofing systems that utilize cold applied adhesive as the membrane bonding agent. Suitable systems include single ply, cold applied modified bitumen and cold applied BUR. **DO NOT USE WITH HOT ASPHALT, COAL TAR OR HOT APPLIED MEMBRANES.**

FlintBoard ISO Cold is available in 4' x 4' and 4' x 8' panels, in a variety of thicknesses.

#### **FlintBoard ISO Cold Compliances**

- ASTM C1289, Type II, Class 2
- Miami-Dade County, Florida
- California State Insulation Quality Standards and Title 25, Foam Flammability Criteria
- IBC, BOCA, ICBO, and SBCCI Sections on Foam Insulation (Chapter 26)
- Meets CAN/CGSB-51.26-M86. Meets CAN/ULC-S704

#### **FM Approval Standard 4450/4470**

FlintBoard ISO Cold is approved for Class 1 insulated steel, wood, concrete and gypsum 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)**

Some classifications for fire resistance are P225, P230, P259, P508, P510, P514, P701, P710, P713, P717, P718, P719, P720, P722, P723, P724, P725, P727, P728, P729, P730, P732, P801, P814, P815, P818, P819, P823, and P828. See UL Fire Resistance Directory for updated listings.

#### **UL Certified for Canada**



## **ISO-T Cold**

Tapered

Polyisocyanurate

Roof Insulation

Rigid, board insulation specifically for roof membranes applied using cold adhesive, in a tapered design to promote proper roof drainage.

Not for use with hot applied roofing materials.

FlintBoard™ ISO-T Cold Tapered Polyisocyanurate Roof Insulation is manufactured in a tapered profile to offer the combination of high thermal value plus promotion of proper roof drainage. As with regular FlintBoard ISO Cold, FlintBoard ISO-T Cold features closed-cell polyiso core with integrally laminated heavy, coated glass facers. In multi-layer roof system applications, FlintBoard ISO-T Cold is installed over one layer of FlintBoard ISO in accordance with CertainTeed specifications.

FlintBoard ISO-T Cold is offered in a variety of tapered panels, providing average long-term thermal resistance (LTTR) values from 4.5 to 15.3. Higher LTTR values can be achieved with layers of flat FlintBoard ISO. Available in 4' x 4' panels only.

FlintBoard ISO-T Cold is a recommended roof insulation for use in conjunction with CertainTeed Commercial Roofing Systems including Flintlastic Roof Systems which utilize SBS modified bitumen adhesive as the membrane bonding agent.

### **FlintBoard ISO-T Cold Compliances**

- 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
- State of Florida Product Approval

### **FM Standard 4450/4470 Approval**

FlintBoard ISO-T Cold 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 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)**

Some classifications for fire resistance are P230, P259, P508, P510, P514, P710, P711, P715, P717, P718, P814, P815, P818, and P828.

See UL Fire Resistance Directory for updated listings.



## **ISO Plus**

Polyisocyanurate  
Composite  
Roof Insulation  
With Laminate  
Perlite

FlintBoard ISO Plus Polyisocyanurate Composite Roof Insulation features a closed-cell polyiso core bonded to 1/2" perlite with a fiber-reinforced felt facer on the bottom side. The perlite top makes FlintBoard ISO Plus an ideal recovery board, and when used as the second layer over FlintBoard ISO eliminates the need for a separate overlay board, yet retains the benefits of a second layer of ISO. FlintBoard ISO Plus composite board may be used with BUR, modified bitumen, and certain single ply roof systems. It is offered in a variety of thicknesses, in 4' x 4' or 4' x 8' panels.

### **FlintBoard ISO Plus Compliances**

- 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 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**

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, P711, P715, P718, P814, P815, P818, and P828.

See UL Fire Resistance Directory for updated listings.

## **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; 4' x 4' panel sizes only.



## **ISO WF**

Composite  
Polyisocyanurate  
Wood Fiberboard  
Roof Insulation

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

Consult membrane manufacturer for suitability and system requirements.

FlintBoard ISO WF Composite Polyisocyanurate/Wood Fiberboard Roof Insulation features a closed-cell polyiso core bonded to 1/2" high-density wood fiberboard with a fiber-reinforced felt facer on the bottom side. The wood fiberboard top makes FlintBoard ISO WF an ideal recovery board, and when used as the second layer over FlintBoard ISO eliminates the need for a separate overlay board, yet retains the benefits of a second layer of ISO.

FlintBoard ISO WF is offered in a variety of thicknesses, providing long-term thermal resistance (LTTR) values from 7.3 to 26.4. Available in 4' x 4' and 4' x 8' panels.

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

### **FlintBoard ISO WF Compliances**

- 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
- State of Florida Product Approval

### **FM Standard 4450/4470 Approval**

FlintBoard ISO WF 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**

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

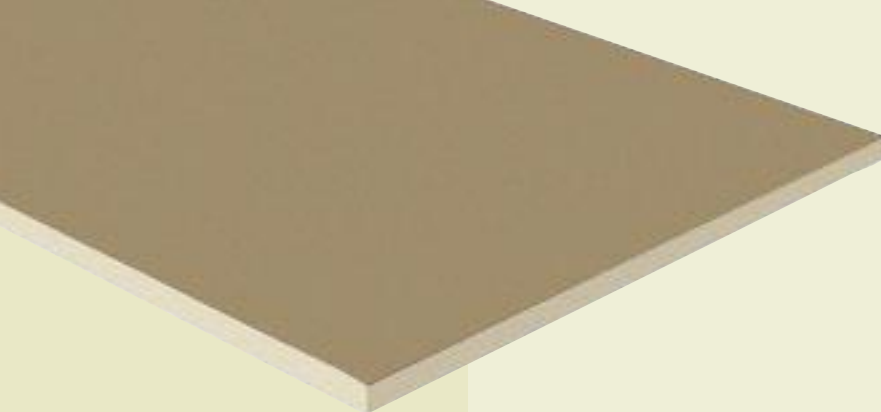
### **UL Standard 263 Fire Resistance Classification (ASTM E119)**

Some classifications for fire resistance are P230, P259, P508, P510, P514, P710, P711, P715, P718, P814, P815, P818, and P828. 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

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 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 3.5 to 27.1. 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.

### **FlintBoard ISO DD Compliances**

- 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
- State of Florida Product Approval

### **FM Standard 4450/4470 Approval**

FlintBoard ISO DD 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.

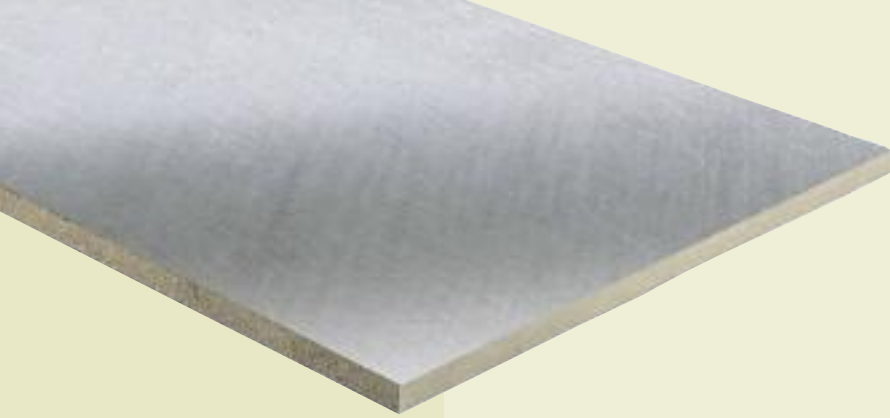
### **UL Standard 790 (ASTM E108) Classification**

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, P711, P715, P718, P814, P815, P818, and P828.

See UL Fire Resistance Directory for updated listings.



**ISO F**  
Polyisocyanurate  
Roof Insulation  
Bonded to  
Trilaminate Foil

Rigid board insulation specifically for single ply roofing systems.

FlintBoard™ ISO F Polyisocyanurate Roof Insulation features a closed-cell polyiso core, bonded on each side to trilaminate foil facers. FlintBoard ISO F is approved for ballasted and mechanically attached single ply.

FlintBoard ISO F is offered in a variety of thicknesses, providing long-term thermal resistance (LTTR) values from 6.7 to 24.6. FlintBoard ISO F is also available in 25-psi formula. Available in 4' x 4' and 4' x 8' panels.

**FlintBoard ISO F Compliances**

- ASTM C1289, Type I, Class 2
- Miami-Dade County, Florida
- IBC, NBC, UBC, SBC Sections on Foam Insulation
- State of Florida Product Approval

**FM Standard 4450/4470 Approval**

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)**

Some classifications for fire resistance are P225, P230, P259, P508, P510, P514, P701, P710, P713, P717, P718, P719, P720, P722, P723, P724, P725, P727, P728, P729, P730, P732, P801, P814, P815, P818, P819, P823 and P828. See UL Fire Resistance Directory for updated listings.

**UL Certified for Canada**



## **ISO NB**

Composite  
Polyisocyanurate  
OSB  
Roof Insulation

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

Consult membrane manufacturer for suitability and system requirements.

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 25.6. Available in 4' x 4' and 4' x 8' panels.

FlintBoard ISO NB is a recommended roof insulation in conjunction with CertainTeed Roofing Systems.

### **FlintBoard ISO NB Compliances**

- 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
- State of Florida Product Approval

### **FM Standard 4450/4470 Approval**

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)**

Some classifications for fire resistance are P230, P259, P508, P510, P514, P710, P711, P715, P718, P814, P815, P818, and P828.

See UL Fire Resistance Directory for updated listings.



**CV**  
Cross Ventilating  
Polyisocyanurate  
Roof Insulation

Rigid board insulation specifically for use over sloped unventilated roof decks.

FlintBoard™ CV Polyisocyanurate 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 6.0". Non-standard vent spaces are available on special order.

**FlintBoard CV Compliances**

- 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

**FM Standard 4450/4470 Approval**

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 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**

## **EPS**

### Roof Insulation

FlintBoard EPS Roof Insulation is a lightweight, rigid EPS (molded, expanded polystyrene) insulation that provides a cost-effective, energy efficient roof insulation alternative. FlintBoard EPS Insulation's thermal and mechanical properties make it a suitable insulation for residential, commercial and industrial applications where high LTTR-value, permanence and moisture resistance are critical.

Type 1 EPS insulation (1.0 pcf) provides a typical long-term R-value of 3.85 per inch (K factor = 0.26) at a mean temperature of 75°F and 4.17 R per inch at 40°F.

Available in a range of densities, in both standard and custom-cut sizes, FlintBoard EPS Insulation meets the requirements of architects, contractors and building owners. FlintBoard EPS Insulation offers a smooth, non-abrasive surface for ease of handling and requires no special tools or construction techniques.

FlintBoard EPS Insulation is a cost-effective choice for insulation in a low slope system. It may be used without a coverboard in loose-laid ballasted and mechanically attached single ply roof systems. It may be used with a coverboard in adhered single ply roof systems and built-up roofing (BUR). (Follow roof system manufacturer's recommendation for appropriate density of product).

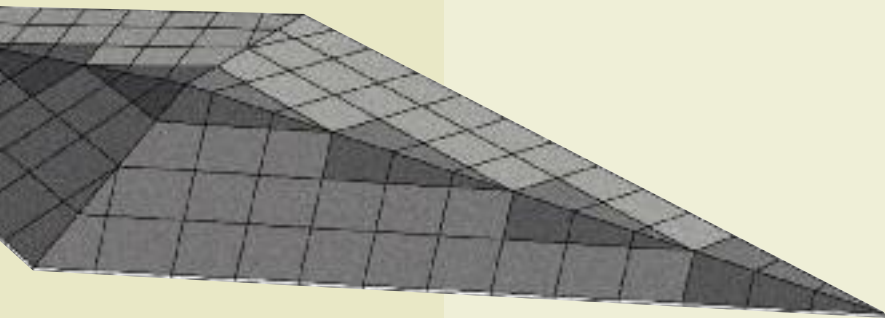
#### **Standard Compliances**

When applied in accordance with code requirements, FlintBoard EPS Roof Insulation meets or exceeds ASTM Specification C578 Types I, VIII, II, IX. FlintBoard EPS is third party, quality assurance inspected.

FlintBoard EPS complies with HUD/FHA "Use of Materials Bulletin No. 71", as well as the requirements of BOCA, ICBO, and SBCCI. FlintBoard EPS Roof Insulation is an approved component in U.L. Class A roof systems.

FlintBoard EPS is a U.L. classified fire rated foam plastic up to 6" thick (\*flame spread less than 25, smoke development less than 450).

\*Flame spread and smoke development ratings derived are not intended to reflect hazards under actual fire conditions. FlintBoard EPS Roof Insulation contains a fire retardant to inhibit accidental ignition but must be considered combustible and may constitute a fire hazard if improperly used or installed. If required it must be separated from an internally occupied area by 1/2" gypsum board or equivalent.



## Pre-Cut Crickets

Pre-Cut  
Polyisocyanurate  
Roof Crickets

FlintBoard™ Pre-Cut Crickets are specified for use in hot asphalt or coal tar BUR, modified bitumen and single ply membrane systems. FlintBoard Pre-Cut Crickets are manufactured in a tapered profile to attain positive drainage while maintaining the highest thermal efficiency available in a tapered system.

FlintBoard Pre-Cut Crickets are pre-packaged with only the triangular sections, not the entire cricket. Each cricket has a right angle to align with CertainTeed's standard FlintBoard 4' x 4' tapered insulation panels. Available in 1/4" per ft. and 1/2" per ft. slope. Construction variances from building drawings are easily accommodated on site. Specify FlintBoard Pre-Cut Crickets, the pre-engineered HINGED cricket.

### Codes and Compliances

- 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, BOCA, ICBO and SBCCI Sections on Foam Insulation
- CCMC
- Meets CAN/CGSB Standards

### FM Standard 4450/4470 Approval

Tapered FlintBoard ISO-T 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

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 for Tapered AC Foam are P225, P230, P259, P508, P510, P514, P701, P710, P713, P717, P718, P719, P720, P722, P723, P724, P725, P727, P728, P729, P730, P732, P801, P814, P815, P818, P819, and P828. Some classifications for fire resistance for FlintBoard ISO-T and/or FlintBoard ISO-T Plus are P230, P259, P508, P510, P514, P710, P711, P715, P717, P718, P814, P815, P818, and P828.

### 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.

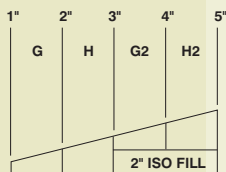
State-of-the-art equipment allows the Tapered Insulation Department to engineer tapered projects accurately and quickly. CertainTeed specialists can remove complications from the bid process, and are ready to respond to any tapered roof insulation need.

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.

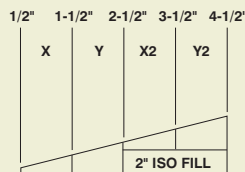


CertainTeed offers FlintBoard ISO-T tapered products in the most popular and efficient slopes of 1/8", 1/4" and 1/2" per foot systems; however, other slopes can be provided on a special order basis.

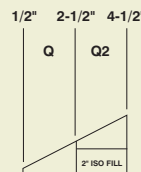
FlintBoard ISO-T tapered polyiso insulation is also available in 25-psi formula.



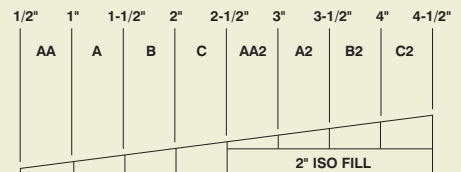
Typical cross-section of 1/4" slope with 1" start shown above as 4 panels @ 4'-0" each = 16'-0" run.



Typical cross-section of 1/4" slope with 1/2" start shown above as 4 panels @ 4'-0" each = 16'-0" run.



Typical cross-section of 1/2" slope with 1/2" start shown above as 2 panels @ 4'-0" each = 8'-0" run.



Typical cross-section of 1/8" slope with 1/2" start shown above as 8 panels @ 4'-0" each = 32'-0" run.

# 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.

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.

## Moisture/Vapor Control

Vapor retarders are used to impede the passage of water vapor into roofing systems, thereby preventing condensation and resulting damage to the insulation and roof system. All FlintBoard Roof Insulation Products may be installed with or without a vapor retarder, the need for which is determined by the designer.

CertainTeed recommends that the designer consult the NRCA Roofing and Waterproofing Manual for guidance in determining the need for a vapor retarder. 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 significant moisture into the roof system. Therefore, CertainTeed cannot be responsible for damage to the insulation when exposed to construction-generated moisture.

Refer to the NRCA Roofing and Waterproofing Manual for their recommendations for the use of a vapor retarder when construction-generated moisture is present (4th Edition, Volume 1, p.121). Refer to CertainTeed Technical Bulletin CT-ISO-08-02.

## Concrete Decks

Concrete and poured gypsum decks require special consideration to address the significant factor of inherent moisture. Consult the NRCA Roofing and Waterproofing Manual for recommendations and instructions.

## 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.



# Product Installation

Consult the membrane manufacturer 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.

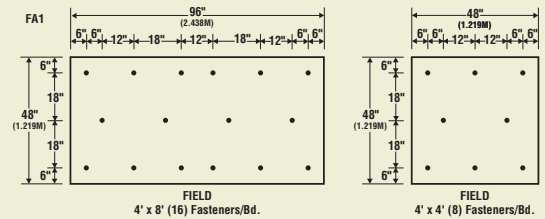
Refer to FM Loss Prevention Data Sheet 1-29 for special considerations regarding perimeter and corners of the roof. For proper attachment of insulation to lightweight insulating concrete decks or poured gypsum concrete decks, follow the instructions outlined in the NRCA Roofing and Waterproofing Manual.

FlintBoard products must not be adhered directly to these decks by any bitumen or adhesive attachment method.

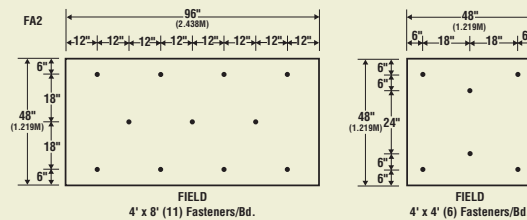
## Single-Ply Roof Membrane Systems — Fully Adhered

FlintBoard ISO, FlintBoard ISO Cold, FlintBoard ISO WF, FlintBoard ISO DD and FlintBoard ISO-T are the most commonly specified products in fully adhered single ply membrane systems.

When a single ply membrane is specified for direct application to FlintBoard ISO, the FlintBoard ISO should be installed with the unmarked side up, using only one adhesive application to the insulation. The adhesive should be applied in strict accordance with the manufacturer's instructions, and must be allowed to dry



- Notes:
1. Minimum thickness of insulation shall be 1.3" to 1.4"
  2. See Factory Mutual Approval Guide for approved fasteners/plates
  3. FM 1-90 fastening pattern
  4. Refer to FM Loss Prevention Data Sheet 1-29 or consult the roof system manufacturer for perimeter and corner enhancement recommendations.



- Notes:
1. Minimum thickness of insulation shall be 1.5" - 1.9"
  2. See Factory Mutual Approval Guide for approved fasteners/plates
  3. FM 1-90 fastening pattern
  4. Refer to FM Loss Prevention Data Sheet 1-29 or consult the roof system manufacturer for perimeter and corner enhancement recommendations.

sufficiently to become tacky to the touch before the single ply membrane is applied.

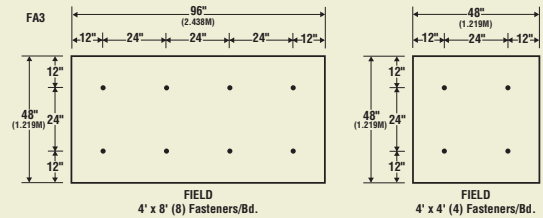
For cold weather applications, the membrane adhesive should be applied at the temperature recommended by the membrane manufacturer. Do not thin the adhesive with solvents, which can adversely affect the insulation.

# Product Installation

Failure to allow the adhesive solvents to evaporate or failure to protect the insulation from damage can cause the facer and membrane to separate from the foam core.

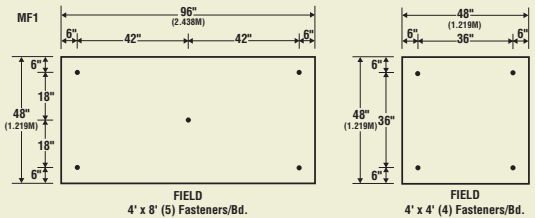
## Single-Ply Membrane Systems — Mechanically Attached

FlintBoard ISO, FlintBoard ISO Cold, FlintBoard ISO WF, FlintBoard ISO DD and FlintBoard ISO-T may be used under this membrane system. The insulation should be attached with FM approved fasteners in accordance with the following fastening patterns (MF1).



**Notes:**

1. Minimum thickness of insulation shall be 2.0"
2. See Factory Mutual Approval Guide for approved fasteners/plates
3. FM 1-90 fastening pattern
4. Refer to FM Loss Prevention Data Sheet 1-29 or consult the roof system manufacturer for perimeter and corner enhancement recommendations.



**Notes:**

1. Minimum thickness of insulation shall be 1.3"
2. See Factory Mutual Approval Guide for approved fasteners/plates
3. Fastening pattern for assemblies that do not incorporate air or vapor retarders
4. FM 1-90 fastening pattern
5. Refer to FM Loss Prevention Data Sheet 1-29 or consult the roof system manufacturer for perimeter and corner enhancement recommendations.

## Loose-Laid Ballasted Single-Ply Membrane Systems

FlintBoard Polyisocyanurate Roof

Insulation products may be used with ballasted systems. CertainTeed does not require attachment of the insulation in this system; however, for projects insured by FM or that require FM compliance, refer to FM Loss Prevention Data Sheets.

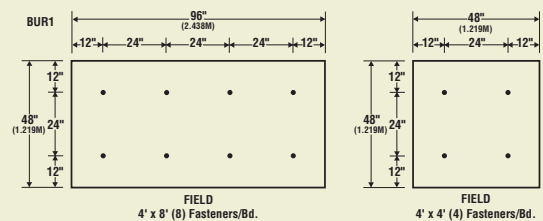
All installed insulation must fit together tightly to prevent separation, movement and damage during membrane installation. After the membrane is installed, sufficient amounts of ballast must be applied to prevent insulation and membrane movement.

## 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. Check with membrane manufacturer for recommended installation procedures.

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 fiber board, applied using hot asphalt.



**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 Plus
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.

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

# Product Installation

## **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 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)  $\pm 25^{\circ}\text{F}$ . The bitumen used must have a temperature no higher than  $390^{\circ}\text{F}$  at the point of contact with FlintBoard products.

## **Metal Roof Systems Installation Recommendations**

Any FlintBoard product can be used under metal roof systems fastened through the insulation into the roof deck. Consult the metal roof panel manufacturer for insulation attachment details.

When installing metal roofing directly over FlintBoard ISO, fasten insulation as a minimum with FM approved fasteners and insulation plates at the rate of 1 fastener per 6.4 sq. ft.

## **Limitation of Liability**

CertainTeed hereby expressly disclaims any and all representations and warranties regarding Flintboard, express 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.

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CertainTeed Corporation  
P.O. Box 860  
Valley Forge, PA 19482

Professional: 800-233-8990  
[www.certainteed.com](http://www.certainteed.com)

