

# ElastoTherm™ B

## Roof Insulation



### Product Information:

ElastoTherm B is a closed cell polyisocyanurate thermal insulation panel with an integrally bonded fiber reinforced facer and is compatible with Bitec roof membranes.

- Available in both flat and tapered panels
- Manufactured using a CFC-free, HCFC-free, and HFC-free foam blowing technology that has zero ozone depletion potential (ODP) and virtually no global warming potential.
- Available in both Grade 2 (20 psi) and grade 3 (25 psi) compressive strengths tested per ASTM C 1289.

### Approvals:

- UL 1256 Insulated Metal Deck Constructions No. 120, 123, & 292
- UL 790 Roofing Systems Classification
- UL 263 Fire Resistance Classification
- UL 1897 Uplift Resistance
- FM 4450/4470 (refer to RoofNav for specific details)
- Florida Approved (FL17989)



### Flat Panels:

- Sizes:
  - 4 ft X 4 ft
  - 4 ft X 8 ft
  - Thickness: 1 to 4 inches
- Refer to table 1 for flute spans and R value information

### Tapered Panels

- Sizes
  - 4 ft X 4 ft
  - Thickness: ½ to 4-½ inches
- Taper designs and shop drawings available.



# ElastoTherm B

**Table 1 - Thermal Data**

Thickness		LTTR Value	RSI	Flute Spanability	
in	mm			in	mm
1.0	25.4	5.7	1.00	2.625	66.68
1.5	38.1	8.6	1.50	4.375	111.13
2.0	50.8	11.4	2.01	4.375	111.13
2.5	63.5	14.4	2.53	4.375	111.13
3.0	76.2	17.4	3.06	4.375	111.13
3.5	88.9	20.5	3.60	4.375	111.13
4.0	101.6	23.6	4.15	4.375	111.13

**Storage:**

- Store panels flat and in a horizontal position to prevent damage.
- Store elevated (at least 3 inches) and covered to protect from environmental damage.
- Do not use wet or damaged panels.
- Refer to PIMA Tech Bulletin No. 109 for additional guidelines.

**Table 2 - Tapered Thermal Data**

Panel	LTTR	RSI	Thickness	
			in	mm
AA	4.3	0.76	0.5-1.0	12-25
A	7.1	1.25	1.0-1.5	25-38
B	10.0	1.76	1.5-2.0	38-50
C	12.9	2.27	2.0-2.5	50-63
X	5.7	1.00	0.5-1.5	12-38
Y	11.4	2.01	1.5-2.5	38-63
Q	8.6	1.51	0.5-2.5	12-63

**Installation:**

- Panels must be kept dry from storage through installation. Install only as much as can be covered with roofing that day.
- When using multiple layers of insulation, joints should be staggered a minimum of 6 inches to prevent thermal bridging.
- Panels must be fitted neatly to the roof deck and with no more than a ¼ inch gap around penetrations.
- Panels should be abutted together and adjacent panels should have their joints staggered.
- New concrete decks must be fully hydrated and are no longer releasing moisture.

**Physical Properties**

Property	Result	ASTM Test
Compressive Strength, psi	20 (grade 2)	D1621
Dimensional Stability, %	<2	D2126
Water Absorbtion, %	<1.5	C209
Vapor Transmission, perm	<1.5	E96
Flame Spread	<75	E84
Smoke Developed	<450	E84
Density, pcf	2.0	D1622



# ElastoTherm™ E

## Roof Insulation



### Product Information:

ElastoTherm E is a closed cell polyisocyanurate thermal insulation panel with an integrally bonded inorganic glass fiber reinforced facer and is compatible with Bitec roof membranes.

- Available in both flat and tapered panels
- Manufactured using a CFC-free, HCFC-free, and HFC-free foam blowing technology that has zero ozone depletion potential (ODP) and virtually no global warming potential.
- Available in both Grade 2 (20 psi) and grade 3 (25 psi) compressive strengths tested per ASTM C 1289.

### Approvals:

- UL 1256 Insulated Metal Deck Constructions No. 120, 123, & 292
- UL 790 Roofing Systems Classification
- UL 263 Fire Resistance Classification
- UL 1897 Uplift Resistance
- FM 4450/4470 (refer to RoofNav for specific details)
- Florida Approved (FL17989)



### Flat Panels:

- Sizes:
  - 4 ft X 4 ft
  - 4 ft X 8 ft
  - Thickness: 1 to 4 inches
- Refer to table 1 for flute spans and R value information

### Tapered Panels

- Sizes
  - 4 ft X 4 ft
  - Thickness: ½ to 4-½ inches
- Taper designs and shop drawings available.



# ElastoTherm E

**Table 1 - Thermal Data**

Thickness		LTTR Value	RSI	Flute Spanability	
in	mm			in	mm
1.0	25.4	5.7	1.00	2.625	66.68
1.5	38.1	8.6	1.50	4.375	111.13
2.0	50.8	11.4	2.01	4.375	111.13
2.5	63.5	14.4	2.53	4.375	111.13
3.0	76.2	17.4	3.06	4.375	111.13
3.5	88.9	20.5	3.60	4.375	111.13
4.0	101.6	23.6	4.15	4.375	111.13

**Storage:**

- Store panels flat and in a horizontal position to prevent damage.
- Store elevated (at least 3 inches) and covered to protect from environmental damage.
- Do not use wet or damaged panels.
- Refer to PIMA Tech Bulletin No. 109 for additional guidelines.

**Table 2 - Tapered Thermal Data**

Panel	LTTR	RSI	Thickness	
			in	mm
AA	4.3	0.76	0.5-1.0	12-25
A	7.1	1.25	1.0-1.5	25-38
B	10.0	1.76	1.5-2.0	38-50
C	12.9	2.27	2.0-2.5	50-63
X	5.7	1.00	0.5-1.5	12-38
Y	11.4	2.01	1.5-2.5	38-63
Q	8.6	1.51	0.5-2.5	12-63

**Installation:**

- Panels must be kept dry from storage through installation. Install only as much as can be covered with roofing that day.
- When using multiple layers of insulation, joints should be staggered a minimum of 6 inches to prevent thermal bridging.
- Panels must be fitted neatly to the roof deck and with no more than a ¼ inch gap around penetrations.
- Panels should be abutted together and adjacent panels should have their joints staggered.
- New concrete decks must be fully hydrated and are no longer releasing moisture.

**Physical Properties**

Property	Result	ASTM Test
Compressive Strength, psi	20 (grade 2)	D1621
Dimensional Stability, %	<2	D2126
Water Absorbtion, %	<1.5	C209
Vapor Transmission, perm	<4.0	E96
Flame Spread	<75	E84
Smoke Developed	<450	E84
Density, pcf	2.0	D1622



# **ElastoTherm™**

## **HD Coverboard**

### **High Density Roof Coverboard Insulation**



#### **Product Information:**

ElastoTherm HD Coverboard is a closed cell polyisocyanurate foam core bonded to an inorganic ElastoTherm E coated glass facer.

- Manufactured using a CFC-free, HCFC-free, and HFC-free foam blowing technology that has zero ozone depletion potential (ODP) and virtually no global warming potential.
- UL Environmental evaluated to be resistant mold growth based on UL 2824.
- Tested per ASTM C 1289 to have a minimum compressive strength of 80 psi (551 kPa).

#### **Approvals:**

- UL 1256 Insulated Metal Deck Constructions No. 120, 123, & 292
- UL 790 Roofing Systems Classification
- UL 263 Fire Resistance Classification
- UL Class B over combustible decks with UL Classified Membranes
- FM 4450/4470 (refer to RoofNav for specific details)
- FM 4473 rated SH-1 for Severe Hail



#### **Flat Panels:**

- Sizes:
  - 4 ft X 4 ft
  - 4 ft X 8 ft
  - Thickness: 0.5 inches

#### **Notes:**

- This product will burn if exposed to significant heat and intensity.
- Do not apply flame directly to ElastoTherm HD Coverboard.
- Recommended for use with self adhering and single ply systems.



# ElastoTherm HD Coverboard

**Table 1 - Thermal Data**

Thickness		LTTR Value	RSI	Pieces/Package
in	mm			
0.5	12.7	2.5	0.44	42

**Table 2 - Fastening Guidelines\***

Thickness	FM Rating	Field Fasteners per 4X8 Board
0.5"	1-75	12
	1-90	16

\* Consult the Bitec technical department, local building codes, contract documents, FM Global, FBC, Miami-Dade County and any other referenced sources for full fastening details.

**Physical Properties**

Property	Result	ASTM Test
Compressive Strength, psi	Grade 1	D1621
Dimensional Stability, %	<0.5	D2126
Water Absorbtion, %	<3.0	C209
Vapor Transmission, perm	<1.5	E96
Flame Spread	<75	E84
Smoke Developed	<450	E84
Tensile Strength, psf	>2000	D1623

## Storage:

- Store panels flat and in a horizontal position to prevent damage.
- Store elevated (at least 3 inches) and covered to protect from environmental damage.
- Do not use wet or damaged panels.

## Installation:

- Panels must be kept dry from storage through installation. Install only as much as can be covered with roofing that day.
- When using multiple layers of insulation, joints should be staggered a minimum of 6 inches to prevent thermal bridging.
- Panels should be abutted together and adjacement panels should have their joints staggered.
- Each ElastoTherm HD Coverboard should be secured over either an existing roof system or base layers of insulation.

# **ElastoTherm™**

## **HD Coverboard FR**

### **High Density Roof Coverboard Insulation**



#### **Product Information:**

ElastoTherm HD FR Coverboard is a closed cell polyisocyanurate foam core bonded to an inorganic ElastoTherm E coated glass facer.

- Manufactured using a CFC-free, HCFC-free, and HFC-free foam blowing technology that has zero ozone depletion potential (ODP) and virtually no global warming potential.
- UL Class A fire rating over a combustible deck when used with a UL classified membrane that is currently classified to be used with ElastoTherm B or ElastoTherm E insulations.
- Tested per ASTM C 1289 to have a minimum compressive strength of 80 psi (551 kPa).

#### **Approvals:**

- UL 790 Roofing Systems Classification
- UL Class A over combustible decks with UL Classified Membranes
- FM 4450/4470 (refer to RoofNav for specific details)



#### **Flat Panels:**

- Sizes:
  - 4 ft X 4 ft
  - 4 ft X 8 ft
  - Thickness: 0.5 inches

#### **Notes:**

- This product will burn if exposed to significant heat and intensity.
- Do not apply flame directly to ElastoTherm HD FR Coverboard.
- Recommended for use with self adhering and single ply systems.



# ElastoTherm HD Coverboard FR

**Table 1 - Thermal Data**

Thickness		LTTR Value	RSI	Pieces/Package
in	mm			
0.625	15.9	2.5	0.44	36

**Table 2 - Fastening Guidelines\***

Thickness	FM Rating	Field Fasteners per 4X8 Board
0.625"	1-75	12
	1-90	16

\* Consult the Bitec technical department, local building codes, contract documents, FM Global, FBC, Miami-Dade County and any other referenced sources for full fastening details.

**Physical Properties**

Property	Result	ASTM Test
Compressive Strength, psi	Grade 1	D1621
Dimensional Stability, %	T<4.0 L&W<1.0	D2126
Water Absorbtion, %	<4.0	C209
Vapor Transmission, perm	<1.5	E96
Flame Spread	<75	E84
Smoke Developed	<450	E84
Tensile Strength, psf	>2000	D1623

## Storage:

- Store panels flat and in a horizontal position to prevent damage.
- Store elevated (at least 3 inches) and covered to protect from environmental damage.
- Do not use wet or damaged panels.

## Installation:

- Panels must be kept dry from storage through installation. Install only as much as can be covered with roofing that day.
- When using multiple layers of insulation, joints should be staggered a minimum of 6 inches to prevent thermal bridging.
- Panels should be abutted together and adjacent panels should have their joints staggered.
- Each ElastoTherm HD Coverboard should be secured over either an existing roof system or base layers of insulation.



# ElastoTherm™ Max

## Roof Insulation



### Product Information:

ElastoTherm Max is a closed cell polyisocyanurate thermal insulation panel with an integrally reflective foil facer and is compatible with Bitec roof membranes.

- Available in both flat and tapered panels
- Manufactured using a CFC-free, HCFC-free, and HFC-free foam blowing technology that has zero ozone depletion potential (ODP) and virtually no global warming potential.
- Available in both Grade 2 (20 psi) and grade 3 (25 psi) compressive strengths tested per ASTM C 1289.

### Approvals:

- UL 1256 Insulated Metal Deck Constructions No. 120, 123, & 292
- UL 790 Roofing Systems Classification
- UL 263 Fire Resistance Classification
- UL 1897 Uplift Resistance
- FM 4450/4470 (refer to RoofNav for specific details)
- Florida Approved (FL17989)



### Flat Panels:

- Sizes:
  - 4 ft X 4 ft
  - 4 ft X 8 ft
  - Thickness: 1 to 4 inches
- Refer to table 1 for flute spans and R value information



# ElastoTherm Max

**Table 1 - Thermal Data**

Thickness		LTTR Value	RSI	Flute Spanability	
in	mm			in	mm
1.0	25.4	5.7	1.00	2.625	66.68
1.5	38.1	8.6	1.50	4.375	111.13
2.0	50.8	11.4	2.01	4.375	111.13
2.5	63.5	14.4	2.53	4.375	111.13
3.0	76.2	17.4	3.06	4.375	111.13
3.5	88.9	20.5	3.60	4.375	111.13
4.0	101.6	23.6	4.15	4.375	111.13

## Storage:

- Store panels flat and in a horizontal position to prevent damage.
- Store elevated (at least 3 inches) and covered to protect from environmental damage.
- Do not use wet or damaged panels.
- Refer to PIMA Tech Bulletin No. 109 for additional guidelines.

## Installation:

- Panels must be kept dry from storage through installation. Install only as much as can be covered with roofing that day.
- When using multiple layers of insulation, joints should be staggered a minimum of 6 inches to prevent thermal bridging.
- Panels must be fitted neatly to the roof deck and with no more than a ¼ inch gap around penetrations.
- Panels should be abutted together and adjacent panels should have their joints staggered.
- New concrete decks must be fully hydrated and are no longer releasing moisture.

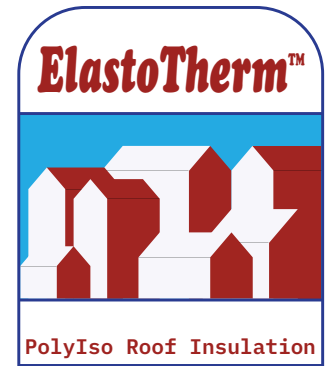
## Physical Properties

Property	Result	ASTM Test
Compressive Strength, psi	20 (grade 2)	D1621
Dimensional Stability, %	<2	D2126
Water Absorbtion, %	<0.5	C209
Vapor Transmission, perm	<0.3	E96
Flame Spread	<75	E84
Smoke Developed	<450	E84
Density, pcf	2.0	D1622

# **ElastoTherm™**

## **Nail Base**

### **Nailable Roof Insulation**



#### **Product Information:**

ElastoTherm Nail Base is a closed cell ElastoTherm B or ElastoTherm E polyisocyanurate thermal insulation panel bonded to a min 7/16" APA/TECO rated or OSB or min 19/32" CDX plywood.

- Combines the benefits of a nailable roof substrate with polyiso insulation.
- Manufactured using a CFC-free, HCFC-free, and HFC-free foam blowing technology that has zero ozone depletion potential (ODP) and virtually no global warming potential.
- Available in both Grade 2 (20 psi) and grade 3 (25 psi) compressive strengths tested per ASTM C 1289.

#### **Approvals:**

- UL 1256 Insulated Metal Deck Constructions No. 120, 123, & 292
- UL 790 Roofing Systems Classification
- UL 263 Fire Resistance Classification
- UL 1897 Uplift Resistance
- FM 4450/4470 (refer to RoofNav for specific details)
- Florida Approved (FL17989)
- Miami-Dade Approved



#### **Flat Panels:**

- Sizes:
  - 4 ft X 8 ft
  - Thickness: 1.5 to 4.5 inches
- Refer to table 1 for flute spans and R value information



# ElastoTherm Nail Base

**Table 1 - Thermal Data**

Thickness		LTTR Value	RSI	Flute Spanability	
in	mm			in	mm
1.5	38.1	8.6	1.50	4.375	111.13
2.0	50.8	11.4	2.01	4.375	111.13
2.5	63.5	14.4	2.53	4.375	111.13
3.0	76.2	17.4	3.06	4.375	111.13
3.5	88.9	20.5	3.60	4.375	111.13
4.0	101.6	23.6	4.15	4.375	111.13
4.5	114.3	24.2	4.25	4.375	111.13

## Storage:

- Store panels flat and in a horizontal position to prevent damage.
- Store elevated (at least 3 inches) and covered to protect from environmental damage.
- Do not use wet or damaged panels.
- Refer to PIMA Tech Bulletin No. 109 for additional guidelines.

## Installation:

- Bitec requires the the use of Bitec **ImperFast** fasteners to approved roof decks.
- Panels must be kept dry from storage through installation. Install only as much as can be covered with roofing that day.
- When using multiple layers of insulation, joints should be staggered a minimum of 6 inches to prevent thermal bridging.

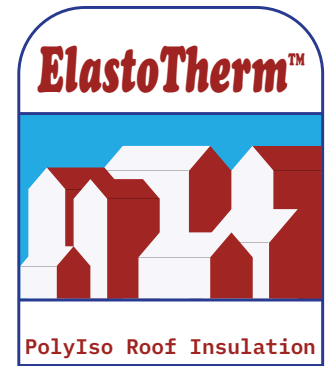
## Physical Properties

Property	Result	ASTM Test
Compressive Strength, psi	20 (grade 2)	D1621
Dimensional Stability, %	<2	D2126
Water Absorbtion, %	<1.0	C209
Vapor Transmission, perm	<1.0	E96
Flame Spread	<75	E84
Smoke Developed	<450	E84
Density, pcf	2.0	D1622

# **ElastoTherm™**

## **Recover Board**

### **Roof Recover Board**



#### **Product Information:**

ElastoTherm Recover Board is a closed cell polyisocyanurate thermal insulation panel with an integrally bonded inorganic glass fiber reinforced facer and is compatible with Bitec roof membranes.

- Manufactured using a CFC-free, HCFC-free, and HFC-free foam blowing technology that has zero ozone depletion potential (ODP) and virtually no global warming potential.
- Available in both Grade 2 (20 psi) and grade 3 (25 psi) compressive strengths tested per ASTM C 1289.

#### **Approvals:**

- UL 790 Roofing Systems Classification
- UL 2824 resistant to mold growth as validated by UL Environment
- FM 4450/4470 (refer to RoofNav for specific details)
- Florida Approved (FL17989)
- Miami-Dade County Approved



#### **Flat Panels:**

- Sizes:
  - 4 ft X 4 ft
  - 4 ft X 8 ft
  - Thickness: 1 to 4 inches
- Refer to table 1 for flute spans and R value information



# ElastoTherm Recover Board

**Table 1 - Thermal Data**

Thickness		LTTR Value	RSI	Flute Spanability	
in	mm			in	mm
0.50	12.7	2.9	0.51	N/A	N/A
0.75	19.1	4.3	0.76	N/A	N/A
1.00	25.4	5.7	1.00	N/A	N/A

## Storage:

- Store panels flat and in a horizontal position to prevent damage.
- Store elevated (at least 3 inches) and covered to protect from environmental damage.
- Do not use wet or damaged panels.
- Refer to PIMA Tech Bulletin No. 109 for additional guidelines.

## Installation:

- Panels must be kept dry from storage through installation. Install only as much as can be covered with roofing that day.
- When using multiple layers of insulation, joints should be staggered a minimum of 6 inches to prevent thermal bridging.
- Panels should be abutted together and adjacent panels should have their joints staggered.
- Consult the Bitec Technical Department for fastening recommendations, or follow contract, FM, or FBC, requirements.

## Physical Properties

Property	Result	ASTM Test
Compressive Strength, psi	20 (grade 2)	D1621
Dimensional Stability, %	<2	D2126
Water Absorbtion, %	<1.5	C209
Vapor Transmission, perm	<4.0	E96
Flame Spread	<75	E84
Smoke Developed	<450	E84
Density, pcf	2.0	D1622

# ElastoTherm™

## Vented Nail Base

**Nailable Cross Ventilated Roof Insulation**



### Product Information:

ElastoTherm Vented Nail Base is a closed cell ElastoTherm B polyisocyanurate thermal insulation panel bonded to a min 7/16" APA/TECO rated or OSB or min 19/32" CDX plywood. Each panel is separated with and bonded to 5 individual 1.0", 1.5", or 2.0" vent spacer strips.

- Combines the benefits of a cross ventilating air space with a nailable roof substrate and polyiso insulation.
- Manufactured using a CFC-free, HCFC-free, and HFC-free foam blowing technology that has zero ozone depletion potential (ODP) and virtually no global warming potential.
- Available in both Grade 2 (20 psi) and grade 3 (25 psi) compressive strengths tested per ASTM C 1289.

### Approvals:

- UL 1256 Insulated Metal Deck Constructions No. 120, 123, & 292
- UL 790 Roofing Systems Classification
- UL 263 Fire Resistance Classification
- UL 1897 Uplift Resistance
- FM 4450/4470 (refer to RoofNav for specific details)
- Florida Approved (FL17989)
- Miami-Dade Approved



### Flat Panels:

- Sizes:
  - 4 ft X 8 ft
  - Thickness: 2.5 to 6.5 inches





# ElastoTherm Vented Nail Base

Thermal Data										
Composite Thickness	in	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
	mm	64	76	89	102	114	127	140	152	165
1.0" Air Space	LTTR Value	5.7	8.6	11.4	14.4	17.4	20.5	23.6	-	-
	RSI	1.00	1.50	2.01	2.54	3.06	3.60	4.15	-	-
1.5" Air Space	LTTR Value	-	5.7	8.6	11.4	14.4	17.4	20.5	23.6	-
	RSI	-	1.00	1.50	2.01	2.54	3.06	3.60	4.15	-
2.0" Air Space	LTTR Value	-	-	5.7	8.6	11.4	14.4	17.4	20.5	23.6
	RSI	-	-	1.00	1.50	2.01	2.54	3.06	3.60	4.15

## Storage:

- Store panels flat and in a horizontal position to prevent damage.
- Store elevated (at least 3 inches) and covered to protect from environmental damage.
- Do not use wet or damaged panels.
- Refer to PIMA Tech Bulletin No. 109 for additional guidelines.

Net Free Area Per Linear Foot			
Air Space Dimensions	1.0"	1.5"	2.0"
Net Free Area (NFA/LF)	9.50 in <sup>2</sup>	14.25 in <sup>2</sup>	19.00 in <sup>2</sup>

## Installation:

- Bitec requires the use of Bitec **ImperFast** fasteners to approved roof decks.
- Panels must be kept dry from storage through installation. Install only as much as can be covered with roofing that day.
- When using multiple layers of insulation, joints should be staggered a minimum of 6 inches to prevent thermal bridging.

Physical Properties		
Property	Result	ASTM Test
Compressive Strength, psi	20 (grade 2)	D1621
Dimensional Stability, %	<2	D2126
Water Absorbtion, %	<1.0	C209
Vapor Transmission, perm	<1.0	E96
Flame Spread	<75	E84
Smoke Developed	<450	E84
Density, pcf	2.0	D1622

