

## INSULATED PANEL PRODUCTS est. 1983







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Products

anufactured Us

**CTI**<sup>®</sup> Concrete Topped Insulated Roof Panels SRI<sup>®</sup>Solar Reflective Insulated Roof Panels

**CFI**<sup>®</sup> Concrete Faced Insulated Wall Panels

2930 - 13th Avenue SW • Salmon Arm, BC • V1E 3K1 • 250.832.9705 • tech-crete.com



#### **ROOF PANELS**



**Concrete Topped Insulated Roof Panels** 

- Concrete Topped Insulation for Protected Membrane Roof (PMR) assemblies with highly efficient STYRO-FOAM<sup>™</sup> brand foam insulation and a durable concrete topped surface
- 2' x 4' (610 mm x 1220 mm) lightweight, self-ballasted concrete topped insulated panel
- Interlocking tongue and groove assembly, designed to be loose laid
- Concrete topping is a nominal 3/8" (10 mm) thick latex modified grey concrete with a smooth finish. A 1/8" (3 mm) relief score line is cut at 2' (610 mm) along the 4' (1220 mm) length
- Extends membrane life by protecting against:
  - Temperature extremes, UV degradation and hail damage
  - Mechanical damage
  - Occasional roof maintenance foot traffic
  - Vandalism and environmental elements (birds, weather etc.)
- Easy to install
- Visually attractive
- Easy to clean
- Reusable



#### Solar Reflective Insulated Roof Panels

- Solar Reflective Insulation for Protected Membrane Roof (PMR) assemblies with highly efficient STYROFOAM<sup>™</sup> brand foam insulation and a durable concrete topped surface
- All the benfits of CTI<sup>®</sup>, plus solar reflectivity
- Designed to minimize the heat island effect of low-sloped roofs and qualify for LEED<sup>®</sup> SS credit 7.2, Heat Island Effect: Roof
- Since the white concrete topping maintains its solar reflectivity throughout its entire thickness, there is no reflective coating to maintain or reapply. A simple rinse or light pressure wash will rejuvenate the solar reflectivity
- Concrete topping is a nominal 3/8" (10 mm) thick latex modified white concrete with a smooth finish. A 1/8" (3 mm) relief score line is cut at 2' (610 mm) along the 4' (1220 mm) length
- Reusable

#### WALL PANELS



**Concrete Faced Insulated Wall Panels** 

- Concrete Faced Insulation for use below and above-grade, against concrete, block or brick, exposed to a height not to exceed 36' (11 m).
  - Also can be used for Water treatment tank insulation, or any suitably shaped tank process requiring temperature control
- 2' x 4' (610 mm x 1220 mm) prefinished, one step exterior insulating panels complete with patented mounting hardware
- Interlocking tongue and groove assembly
- Highly efficient STYROFOAM<sup>™</sup> brand foam insulation and durable concrete finish in one installation
- The facing is a nominal 5/16" (8 mm) latex modified grey concrete with a light broom finish. A 1/8" (3 mm) relief score line is cut at 2' (610 mm) along the 4' (1220 mm) length.
- Easy to install
- Can be field coated with quality latex or acrylic latex masonry coating to match existing colour, or to upgrade building exterior
- Can be installed in most weather conditions
- Extends life cycle of masonry structures by minimizing freeze / thaw degradation
- Reusable

Available in 2"(R10), 3"(R15) or 4"(R20)



For additional Information, the following publications are available through your local distributer or online at: tech-crete.com/downloads

- CTI<sup>®</sup>, SRI<sup>®</sup> and CFI<sup>®</sup> Master Specifications
- CTI®/SRI® Roof Installtion Guide
- CFI<sup>®</sup> Wall Installtion Guide
- MSDS's
- Warranty Information

### **Potential LEED® CANADA Credits**

PRODUCT	CTI <sup>®</sup> Roof	SRI® Roof	<b>CFI® Wall</b>
Sustainable Sites (SS) Credit 7.2 - Heat Island Effect: Roof	-	1	-
Energy & Atmosphere (EA) Credit 1 - Optimize Energy Performance	1-19	1-19	1-19
Materials & Resources (MR) Credit 1.1 - Building Reuse Credit 2 - Construction Waste Mgt. Maintain Existing Walls, Floors & Roof Credit 3 - Materials Reuse Credit 5 - Regional Materials	1-3 1-2 1-2 1-2	1-3 1-2 1-2 1-2	1-3 1-2 1-2 1-2
Indoor Environmental Quality (IEQ) Credit 3.1 - Construction Indoor Air Quality Management Plan: During Construction Credit 7.1 - Thermal Comfort: Design	1	1 1	1 1
Innovation in Design (ID) Credit 1 - Innovation in Design	1	1	1
<b>Regional Priority (RP)</b> Credit 1 - Durable Building Credit 2 - Regional Priority Credit	1 -	1 1-3	1 1-3

\*See the LEED® section on our website for more information. www.tech-crete.com

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**CONCrete Topped Insulated Roof Panels** Using CAN/ULC - S701 Type 4 Insulation

# **PRODUCT DATA**

#### Manufacturer

#### Tech-Crete Processors Ltd.

2930 - 13th Avenue SW Salmon Arm, BC V1E 3K1 Phone: 250.832.9705 tech-crete.com

#### **Product Description**

#### **BASIC USES**

Concrete Topped Insulated (CTI®) Roof Panels are self-ballasted and

designed for loose laid installation above waterproofing or roofing membranes in a protected membrane roof (PMR) assembly.

CTI<sup>®</sup> roof panels consist of 2" (50 mm), 3" (75 mm), or 4" (100 mm) STYROFOAM<sup>™</sup> brand foam insulation with a 3/8" (10 mm) (nominal) thick latex-modified concrete topping. They provide insulation and ballast in an easy-to-install product that can be handled by one person. They are ideal for new and retrofit applications where dead load roof weight is a concern.

With tongue and groove sides, CTI® roof panels can be easily removed and reused after membrane inspection or to construct additional stories in a vertical expansion project.

CTI<sup>®</sup> roof panels keep the roof membrane at a steady temperature, minimizing the harmful effects of freeze-thaw cycles, weathering, UV degradation, and physical damage during and after construction.

#### Sizes

**Panel Size** 2' x 4' (610 mm x 1220 mm)

Foam Thickness	Weight (Nom.)
2" (R10)	4.5 lb/ft2
3" (R15)	4.65 lb/ft2
4" (R20)	4.8 lb/ft2

#### **Edge Treatment**

Tongue and groove on 4' edge and butt edge on 2' side.

#### **Technical Data**

#### APPLICABLE STANDARDS

- ASTM C578-01 Standard Specification for Rigid Cellular Polystyrene Thermal Insulation
  - ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
  - ASTM D1621 Standard Test Method For Compressive Properties of Rigid Cellular Plastics
  - ASTM D2842 Standard Test Method For Water Absorption of **Rigid Cellular Plastics**

- ASTM E96 Standard Test Method For Water Vapour Transmission of Materials
- ASTM D696 Standard Test Method For Coefficient of Linear Thermal Expansion of Plastics Between -30° and 30°C with a Vitreous Silica Dilatometer
- CAN / ULC S701-05 Standard for Thermal Insulation, Polystyrene Boards and Pipe Covering (Type 4)
- CSA A23.2-09 Concrete Materials and methods of Concrete Concrete Construction/Test methods and Standard Practices for Concrete

**NRC Evaluation Listing** CCMC 04888-L

#### Table 1.

Physical Properties of CTI <sup>®</sup> Roof Panels			
Property and Test Method	Value		
Thermal Resistance per inch (25.4 mm), ASTM C518, R-Value (RSI)* min.	5.0 (0.88)		
Foam Compressive Strength-Vertical**, ASTM D1621, psi (kPa), min.	35 (241)		
Mortar Compressive Strength (at 28 days), CSA A23.2-09, psi (MPa), min.	4600 (32)		
Water Absorption, ASTM D2842, % by volume, max.	0.7		
Water Vapour Permeance, ASTM E96, perm, permSI, max.	1.0 (60)		
Maximum Use Temperature, °F (°C)	165 (74)		
Coefficient of Linear Thermal Expansion, ASTM D696, in / in $\bullet$ °F (mm / m $\bullet$ °C)	3.5 x 10 <sup>-5</sup> (6.3 x 10 <sup>-2</sup> )		

\* The higher the R-Value or RSI, the greater the insulating power.

\*\* Vertical compressive strength is measured at 10% deformation or at yield, whichever occurs first.



#### PHYSICAL / CHEMICAL PROPERTIES

**CTI**<sup>®</sup> roof panels exhibit physical properties as indicated in Table 1 when tested as represented. For chemical resistance properties of STYROFOAM<sup>™</sup> brand foam insulation, see Table 2.

#### **ENVIRONMENTAL DATA**

**CTI**<sup>®</sup> roof panels are hydrochlorofluorocarbon (HCFC) free with zero ozone-depletion potential. **CTI**<sup>®</sup> roof panels will help achieve energy efficiency with a product that is itself produced in an environmentally responsible way.

**CTI**<sup>®</sup> roof panels are reusable in many applications.

#### FIRE PROTECTION

**CTI®** roof panels are combustible; protect from high heat sources. For more information, consult product Material Safety Data Sheet (MSDS).

#### Installation

**CTI**<sup>®</sup> roof panels are strong, lightweight, and easy to install. Contact your local Tech-Crete distributor for more specific instructions on installation of **CTI**<sup>®</sup> roof panels in a protected membrane roof assembly. A detailed installation guide is also available through your local Tech-Crete distributor or online at:

tech-crete.com/downloads

**CTI**<sup>®</sup> roof panels should be stored under cover (warehouse) until installed.

#### **Availability**

**CTI**<sup>®</sup> roof panels are available through an extensive network of distributors. For product availability or for the name of your local Tech-Crete distributor, call 250.832.9705 or visit our website at: tech-crete.com

#### Warranty

For warranty details, visit our website at tech-crete.com.

#### **Maintenance**

**CTI**<sup>®</sup> roof panels are self-ballasted, lightweight insulated roof panels. They can accept occasional maintenance foot traffic, but they are not intended for use as a patio, plaza deck or construction platform. A regularly scheduled preventative maintenance program of inspection and cleaning will ensure long term durability of all roof components.

#### **Technical Services**

Tech-Crete Processors can provide technical information to help address questions regarding **CTI**<sup>®</sup> roof panels.

#### Table 2.

#### Chemical Resistance\* of STYROFOAM<sup>™</sup> Brand Foam Insulation Acid, inorganic, weak\*\* Excellent Salts Excellent Acid, inorganic, strong\*\* Excellent Insecticides Not recommended Acid, organic, weak\*\* Excellent Kerosene Poor Acid, organic, strong\*\* Good Mineral oil USP Excellent Bases Excellent Naphtha (VMP) Not recommended Alcohols, including isopropyl alcohol Turpentine Excellent Not recommended Methyl ethyl ketone Not recommended Beer Good Gasoline Not recommended Polyglycols, including propylene glycol Excellent Hvdrocarbons Not recommended Fruit Juices Good

\* Explanation of ratings:

Excellent = The plastic was unaffected for the duration of the test.

Good = A very slight clouding or discolouration of the plastic

Poor = Considerable change in plastic during exposure, possible etching, discolouration, dimensional or weight changes.

Not recommended = Severe attack of the plastic. Became soft and unusable after a few hours of exposure.

\*\* The concrete top can be adversly affected by exposure to acidic environments.

NOTE: This table should be used as a guide only. For design purposes, specific test data on the intended application may be needed.

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## **PRODUCT DATA**

#### Manufacturer

#### Tech-Crete Processors Ltd.

2930 - 13th Avenue SW Salmon Arm, BC V1E 3K1 Phone: 250.832.9705 tech-crete.com

#### **Product Description**

#### **BASIC USES**

#### Solar Reflective Insulated (SRI®)

Roof Panels are self-ballasted and designed for loose laid installation above waterproofing or roofing membranes in a protected membrane roof (PMR) assembly.

**SRI**<sup>®</sup> roof panels consist of 2" (50 mm), 3" (75 mm), or 4" (100 mm) STYRO-FOAM<sup>™</sup> brand foam insulation with 3/8" (10 mm) (nominal) thick latex-modified, solar reflective white concrete topping. Since the white concrete topping maintains its solar reflectivity throughout its entire thickness, there is no reflective coating to maintain or reapply. A simple rinse or light pressure wash will rejuvenate the solar reflectivity. They provide insulation and ballast in an easy-toinstall product that can be handled by one person. They are ideal for new and retrofit applications where dead load roof weight is a concern. With tongue and groove sides, **SRI**<sup>®</sup> roof panels can be easily removed and reused after membrane inspection or to construct additional stories in a vertical expansion project.

SRI<sup>®</sup> roof panels keep the roof membrane at a steady temperature, minimizing the harmful effects of freeze-thaw cycles, weathering, UV degradation, and physical damage during and after construction.

**SRI**<sup>®</sup> Roof Panels are designed to minimize the heat island effect of low-sloped roofs and qualify for LEED® SS credit 7.2, Heat Island Effect: Roof.

#### Sizes

Panel Size 2' x 4' (610 mm x 1220 mm)

Foam Thickness
2" (R10)
3" (R15)
4" (R20)

Weight (Nom.) 4.5 lb/ft2 4.65 lb/ft2 4.8 lb/ft2

#### **Edge Treatment**

Tongue and groove on 4' edge and butt edge on 2' side.

### **Technical Data**

#### APPLICABLE STANDARDS

- ASTM C578-01 Standard Specification for Rigid Cellular Polystyrene Thermal Insulation
  - ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
  - ASTM D1621 Standard Test Method For Compressive Properties of Rigid Cellular Plastics
  - ASTM D2842 Standard Test Method For Water Absorption of **Rigid Cellular Plastics**

#### - ASTM E96 - Standard Test Method For Water Vapour Transmission of Materials

- ASTM D696 Standard Test Method For Coefficient of Linear Thermal Expansion of Plastics Between -30° and 30°C with a Vitreous Silica Dilatometer
- ASTM C1549 Standard Test Method For Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer
- ASTM E1980 Standard Test Method For Calculating Solar **Reflectance Index of Horizontal** and Low-Sloped Opaque Surfaces
- CAN / ULC S701-05 Standard for Thermal Insulation, Polystyrene Boards and Pipe Covering (Type 4)
- CSA A23.2-09 Concrete Materials and methods of Concrete Concrete Construction/Test methods and Standard Practices for Concrete

**NRC Evaluation Listing** CCMC 04888-L

#### Table 1.

Physical Properties of <b>SRI<sup>®</sup> Roof Panels</b>		
Property and Test Method	Value	
Thermal Resistance per inch (25.4 mm), ASTM C518, R-Value (RSI)* min.	5.0 (0.88)	
Foam Compressive Strength-Vertical**, ASTM D1621, psi (kPa), min.	35 (241)	
Mortar Compressive Strength (at 28 days), CSA A23.2-09, psi (MPa), min.	4600 (32)	
Water Absorption, ASTM D2842, % by volume, max.	0.7	
Water Vapour Permeance, ASTM E96, perm, permSI, max.	1.0 (60)	
Maximum Use Temperature, °F (°C)	165 (74)	
Solar Reflectance Index, ASTM E1980	≥78	
Coefficient of Linear Thermal Expansion, ASTM D696, in / in $\bullet$ °F (mm / m $\bullet$ °C)	3.5 x 10 <sup>-5</sup> (6.3 x 10 <sup>-2</sup> )	
* The higher the R-Value or RSL the greater the insulating power		

The higher the R-Value or RSI, the greater the insulating power.

Vertical compressive strength is measured at 10% deformation or at yield, whichever occurs first.



#### PHYSICAL / CHEMICAL PROPERTIES

SRI<sup>®</sup> roof panels exhibit physical properties as indicated in Table 1 when tested as represented. For chemical resistance properties of STYROFOAM<sup>™</sup> brand foam insulation, see Table 2.

#### **ENVIRONMENTAL DATA**

SRI® roof panels are hydrochlorofluorocarbon (HCFC) free with zero ozone-

depletion potential. SRI® roof panels will help achieve energy efficiency with a product that is itself produced in an environmentally responsible way.

**SRI**<sup>®</sup> roof panels are reusable in many applications.

#### **FIRE PROTECTION**

SRI® roof panels are combustible; protect from high heat sources. For more information, consult product Material Safety Data Sheet (MSDS).

#### Installation

**SRI**<sup>®</sup> roof panels are strong, light weight, and easy to install. Contact your local Tech-Crete distributor for more specific instructions on installa-

tion of **SRI**<sup>®</sup> roof panels in a protected membrane roof assembly. A detailed installation guide is also available through your local Tech-Crete distributor or online at:

tech-crete.com/downloads

SRI<sup>®</sup>roof panels should be stored under cover (warehouse) until installed.

#### **Availability**

**SRI**<sup>®</sup> roof panels are available through an extensive network of distributors. For product availability or the name of vour local Tech-Crete distributor. call 250.832.9705 or visit our website at: tech-crete.com

#### Warranty

For warranty details, visit our website at tech-crete.com.

#### Maintenance

**SRI**<sup>®</sup> roof panels are self-ballasted. lightweight insulated roof panels. They can accept occasional maintenance foot traffic, but they are not intended for use as a patio, plaza deck or construction platform. A regularly scheduled maintenance program of inspection and cleaning will ensure long term durability of all roof components. Cleaning may be required to maintain Solar Reflectance Index values.

#### **Technical Services**

Tech-Crete Processors can provide technical information to help address questions regarding **SRI**<sup>®</sup> roof panels.

#### Table 2.

Chemical Resistance* of STYROFOAM <sup>™</sup> Brand Foam Insulation				
Acid, inorganic, weak**	Excellent	Salts	Excellent	
Acid, inorganic, strong**	Excellent	Insecticides	Not recommended	
Acid, organic, weak**	Excellent	Kerosene	Poor	
Acid, organic, strong**	Good	Mineral oil USP	Excellent	
Bases	Excellent	Naphtha (VMP)	Not recommended	
Alcohols, including isopropyl alcohol	Excellent	Turpentine	Not recommended	
Methyl ethyl ketone	Not recommended	Beer	Good	
Polyglycols, including propylene glycol	Excellent	Gasoline	Not recommended	
Hydrocarbons	Not recommended	Fruit Juices	Good	

\* Explanation of ratings:

Excellent = The plastic was unaffected for the duration of the test.

Good = A very slight clouding or discolouration of the plastic

Poor = Considerable change in plastic during exposure, possible etching, discolouration, dimensional or weight changes.

Not recommended = Severe attack of the plastic. Became soft and unusable after a few hours of exposure.

\*\* The concrete top can be adversly affected by exposure to acidic environments.

NOTE: This table should be used as a guide only. For design purposes, specific test data on the intended application may be needed.

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STYROFOAM<sup>™</sup> is a trademark of The DOW Chemical Company

Rev. April 2, 2013

#### tech-crete.com



**CFT**<sup>®</sup> Concrete Faced Insulated Wall Panels Using CAN/ULC - S701 Type 4 Insulation

# **PRODUCT DATA**

#### Manufacturer

#### Tech-Crete Processors Ltd.

2930 - 13th Avenue SW Salmon Arm, BC V1E 3K1 Phone: 250.832.9705 tech-crete.com

#### **Product Description**

#### Concrete Faced Insulated (CFI®)

Wall Panels are a pre-finished, "One-Step" exterior perimeter foundation or low-rise wall insulation panel consisting of STYROFOAM™ brand foam insulation with a factory applied 5/16" (8 mm) (nominal) thick latex-modified concrete facing, with

a slightly broomed finish. CFI® wall panels are installed using specially designed galvanized steel mounting clips, included with each shipment.

#### BASIC USES

CFI® wall panels provide highly efficient insulation and a durable finish in a onestep process. The panels are intended for use below and above-grade, against concrete, block or brick, exposed to a height not to exceed 36 ft (11 m).

**CFI**<sup>®</sup> wall panels are an appropriate perimeter insulation for industrial, commercial and institutional new and retrofit foundation or low-rise wall applications. The one-step process makes installation easy, in any weather, with moderately skilled labour.

**CFI**<sup>®</sup> wall panels can be easily removed and reused in expansion projects.

#### Sizes

Panel Size 2' x 4' (610 mm x 1220 mm)

Foam Thickness	Panel Thickess
2" (R10)	2 5/16"
3" (R15)	3 5/16"
4" (R20)	4 5/16"

#### Edge Treatment

Tongue and groove on 4' edge and butt edge on 2' side.

#### **Technical Data**

#### APPLICABLE STANDARDS

- ASTM C578-01 Standard Specification for Rigid Cellular Polystyrene Thermal Insulation
  - ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
  - ASTM D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics
  - ASTM E96 Standard Test Method for Water Vapour Transmission of Materials
  - ASTM D696 Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30° and 30°C with a Vitreous Silica Dilatometer
  - ASTM D2842 Standard Test Method for Water Absorption of **Rigid Cellular Plastics**

- for Thermal Insulation, Polystyrene Boards and Pipe Covering (Type 4)
  - CSA A23.2-09 Concrete Materials and methods of Concrete Concrete Construction/Test methods and Standard Practices for Concrete

• CAN / ULC S701-05 - Standard

**NRC Evaluation Listing** CCMC 04888-L

#### **ENVIRONMENTAL DATA**

CFI® wall panels are hydrochlorofluorocarbon (HCFC) free with zero ozone-

depletion potential. CFI® wall panels will help achieve energy efficiency with a product that is itself produced in an environmentally responsible way.

**CFI**<sup>®</sup> wall panels are reusable in many applications.

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Physical Properties of CFI <sup>®</sup> Wall Panels			
Property and Test Method	Value		
Thermal Resistance per inch (25.4 mm), ASTM C518, R-Value (RSI)* min.	5.0 (0.88)		
Foam Compressive Strength-Vertical**, ASTM D1621, psi (kPa), min.	35 (241)		
Mortar Compressive Strength (at 28 days), CSA A23.2-09, psi (MPa), min.	4600 (32)		
Water Absorption, ASTM D2842, % by volume, max.	0.7		
Water Vapour Permeance, ASTM E96, perm, permSI, max.	1.0 (60)		
Maximum Use Temperature, °F (°C)	165 (74)		
Coefficient of Linear Thermal Expansion, ASTM D696, in / in $\bullet$ °F (mm / m $\bullet$ °C)	3.5 x 10 <sup>-5</sup> (6.3 x 10 <sup>-2</sup> )		

\* The higher the R-Value or RSI, the greater the insulating power.

\*\* Vertical compressive strength is measured at 10% deformation or at yield, whichever occurs first. Panel is in horizontal position during testing.



#### PHYSICAL / CHEMICAL PROPERTIES

**CFI**<sup>®</sup> wall panels exhibit physical properties as indicated in Table 1 when tested as represented. For chemical resistance properties of STYROFOAM<sup>™</sup> brand foam insulation, see Table 2.

Table 2. Chemical Resistance\* of STYR0F0AM<sup>™</sup> **Brand Foam Insulation** Acid, inorganic, weak\*\* Excellent Acid, inorganic, strong\*\* Excellent Acid, organic, weak\*\* Excellent Acid, organic, strong\*\* Good Bases Excellent Alcohols, including Excellent isopropyl alcohol Methyl ethyl ketone Not recommended Polyglycols, including Excellent propylene glycol Hydrocarbons Not recommended Salts Excellent Insecticides Not recommended Poor Kerosene Mineral oil USP Excellent Naphtha (VMP) Not recommended Turpentine Not recommended Beer Good Gasoline Not recommended Fruit Juices Good Explanation of ratings: Excellent = The plastic was unaffected for the duration of the test

Excellent = The plastic was unaffected for the duration of the test. Good = A very slight clouding or discolouration of the plastic Poor = Considerable change in plastic during exposure, possible etching, discolouration, dimensional or weight changes. Not recommended = Severe attack of the plastic. Became soft and

unusable after a few hours of exposure. The concrete top can be adversly affected by exposure to acidic environments.

NOTE: This table should be used as a guide only. For design purposes, specific test data on the intended application may be needed.

#### FIRE PROTECTION

**CFI**<sup>®</sup> wall panels are combustible; protect from high heat sources. For more information consult product Material Safety Data Sheet (MSDS).

#### Table 3.

Surface Burning Characteristics of CFI<sup>®</sup> wall panels in accordance with CAN/ULC-S102-10

Flame Spread Classification = 10

Smoke Developed Classification = 160

#### **Additional Technical Tests**

#### WALL PANEL SYSTEM FIRE TEST

- Meets Uniform Building Code (UBC) 17-5 ('Room Fire Test Standard for Interior of Foam Plastic Systems'. Criteria is to maintain coverage of foam substrate up to 8' from interior corner, over the duration of the test.)
- Equivalent to current UL 17-15 and UBC 97 revised

## NEGATIVE WIND LOAD AND GRAVITY SHEAR LOAD TESTS

- Clips spaced at 2 ft along each horizontal joint can safely carry the wall panel vertical weight and support the panel under negative wind pressures of up to 25 psf, with a safety factor of 2.
- If greater wind pressures are anticipated, additional clips may be placed to provide the additional strength.

### TENSILE BOND STRENGTH OF MORTAR FACING

 Remains intact after 1000 freeze / thaw cycles using ASTM C666-B (equivalent to approximately 25 Canadian winters)

#### IMPACT RESISTANCE - ASTM G-14 "Up and down method"

• **CFI**<sup>®</sup> wall panels have an impact strength equal to or greater than that of standard 8" thick concrete block, tested in the centre of a cavity.

### Handling & Installation

**CFI**<sup>®</sup> wall panels should be stored under cover (warehouse) until installed.

CFI® wall panels can be installed vertically or horizontally. Vertical installation is recommended for perimeter foundation applications. Horizontal installation is recommended for low-rise wall applications. It is recommended that any masonry irregularities or jagged surfaces on the foundation or exterior wall be removed prior to installation. Shaping the foam side of the panel may be necessary to ensure the panel sits flat against the wall. This procedure will reduce or eliminate cracking caused by uneven wall surfaces. Walls may require air and/ or vapor barrier and foundations should be properly damp-proofed below grade.

Each shipment of **CFI**<sup>®</sup> wall panels includes specially designed galvanized steel mounting clips and fasteners. For additional clips and fasteners, contact your local Tech-Crete distributor or call 250.832.9705.

Contact your local Tech-Crete distributor for more specific instructions on the installation of **CFI**<sup>®</sup> wall panels. A detailed installation guide is also available

through your local Tech-Crete distributor or online at: tech-crete.com/downloads

#### Availability

**CFI**<sup>®</sup> wall panels and clips are available through an extensive network of distributors. For product availability or for the name of your local Tech-Crete distributor, call 250.832.9705 or visit our website at tech-crete.com.

#### Warranty

For warranty details, visit our website at tech-crete.com.

#### **Technical Services**

Tech-Crete Processors Ltd. can provide technical information to help address questions regarding **CFI**® wall panels.

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# Tech-Crete's **CTI**<sup>®</sup> roof panels prove themselves after 25 years of Alberta winters

The Kinesiology building re-roof project at the University of Calgary was able to re-use a significant portion of the CTI<sup>®</sup> roof panels manufactured by Tech-Crete Processors. Originally installed in 1986, the panels were carefully removed to allow access to the underlying components, and then re-installed for use as originally intended; insulation, ballast and protection.

As part of a Protected Membrane Roof (PMR) assembly, CTI<sup>®</sup> roof panels are selfballasted insulated panels consisting of a durable concrete topping on a panel of highly efficient STYROFOAM<sup>™</sup> brand foam insulation. With insulation values ranging from R10 (2") to R20 (4"), CTI<sup>®</sup> roof panels are an effective, reusable, solution for Protected Membrane roofs in all climates.







## **INSULATED PANEL PRODUCTS**

Edmonton Clinic Health Academy LEED<sup>®</sup> Silver (Targeted)

# *LEED*ing the way in Solar Reflective roofing solutions...

Tech-Crete's SRI<sup>\*</sup> roof panels are self ballasted, solar reflecting insulating panels designed for use in a Protected Membrane Roof (PMR) assembly. With its factory applied white concrete topping, SRI<sup>\*</sup> roof panels offer superior insulation, long term durability, membrane protection and solar reflectivity in one easy step.

- Extends membrane life by protecting against:
  - Temperature extremes, UV degradation, and hail damage
  - Occasional roof maintenance foot traffic
  - Mechanical damage (dropped tools etc.)
  - Vandalism and environmental elements (birds, weather, etc.)
- Since the white concrete topping maintains its solar reflectivity throughout its entire thickness, there is no reflective coating to maintain or reapply
- Can be rinsed or pressure washed without the risk of membrane damage
- Designed to minimize the heat island effect of low-sloped roofs and qualify for LEED<sup>\*</sup> SS credit 7.2, Heat Island Effect: Roof

The unique feature of the SRI<sup>\*</sup> roof panel is the white reflective concrete topping. As the environment naturally weathers any exposed roof surface, it can slowly degrade reflective membranes and remove reflective coatings. The topping on the SRI<sup>\*</sup> roof panel is a solid 3/8 inch white reflective concrete. As this topping weathers, it simply exposes more of the same underlying white reflective concrete.



#### Potential LEED<sup>®</sup> CANADA Credits

PRODUCT	CTI◎ Roof	SRI◎ Roof	CFI° Wall
Sustainable Sites (SS) Credit 7.2 - Heat Island Effect: Roof	-	1	-
Energy & Atmosphere (EA) Credit 1 - Optimize Energy Performance	1-19	1-19	1-19
Materials & Resources (MR) Credit 1.1 - Building Reuse Credit 2 - Construction Waste Mgt. Maintain Existing Walls, Floors & Roof Credit 3 - Materials Reuse Credit 5 - Regional Materials	1-3 1-2 1-2 1-2	1-3 1-2 1-2 1-2	1-3 1-2 1-2 1-2
Indoor Environmental Quality (IEQ) Credit 3.1 - Construction Indoor Air Quality Management Plan: During Construction Credit 7.1 - Thermal Comfort: Design	1	1	1
Innovation in Design (ID) Credit 1 - Innovation in Design	1	1	1
Regional Priority (RP) Credit 1 - Durable Building Credit 2 - Regional Priority Credit	1 -	1 1-3	1 1-3

 ${\rm SR}^{i0}$  is a registered trademark of Tech-Crete Processors Ltd. LEED^0 is a registered trademark of the US Green Building Council



### FACT...

Tech-Crete Insulated Panels are an environmentally sound investment.

#### **All Products:**

- Reduce Energy Costs
- Are Reusable
- Are Produced in an environmentally responsible way

#### **CTI**<sup>®</sup> Concrete Topped</sup> Insulated Roof Panels

**SRI**<sup>®</sup> Solar Reflective Insulated Roof Panels **CFI**<sup>®</sup> Concrete Faced Insulated Wall Panels

H2O Adventure & Fitness Centre, Kelowna, BC









#### YOUR REPRESENTITIVE (Western Canada)



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### DISTRIBUTORS (Western Canada)\*









\* For distributors in Eastern Canada, contact manufacturer, or visit us at tech-crete.com



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