2021 IECC

Commercial Compliance Documentation & Thermal Envelope Certificate

When is it required?

Pursuant to C103.6.2 of the IECC, documentation of compliance shall be provided to the building owner as a standalone document or as part of the project record and manuals. C401.3 further establishes a permanent certificate for documenting thermal envelope compliance.

What is required?

◊ Projects utilizing the Prescriptive Compliance Path (C402 through C406 and C408) shall provide the Thermal Envelope Insulation Certificate

- Thermal Envelope Certificate shall document

  - R-values or performance alternative values for envelope insulation and any ducts located outside the conditioned space

  - U-factors & SHGC of fenestrations

  - Results of required building envelope air leakage testing

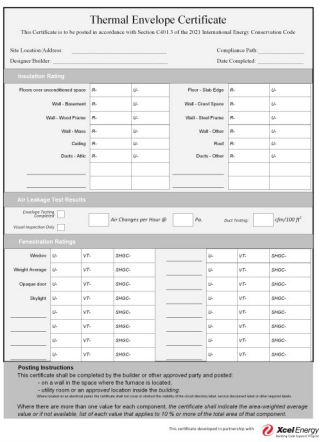
For any component of the building envelope where there may be more than one value, the certificate shall indicate the area-weighted average value or if not available, list of each value that applies to 10 % or more of the total area of that component.

◊ C103.6.2 requires documentation of compliance with Section C303.1.3 for each fenestration installed (*i.e. U-factor, SHGC, and VT*);

◊ C103.6.2 requires documentation of HVAC (C403.8.1) compliance calculations;

◊ C103.6.2 requires documentation of the Interior (C405.3) and Exterior (C405.4) lighting power compliance path, including the building area or space-by space calculations used in determining the power allowance;

◊ For projects utilizing the Total Building Performance Compliance Path(C407); the report requirements are specified in C407.3.1 and C407.3.2


Thermal Envelope Certificate

This Certificate is to be posted in accordance with Section C401.3 of the 2021 International Energy Conservation Code

Site Location/Address: Compliance Path:

Designer/Builder: Date Completed:

Insulation Rating

Floors over unconditioned space	ft-	u-	Floor - Slab-Edge	ft-	u-
Wall - Basement	ft-	u-	Wall - Crawl Space	ft-	u-
Wall - Wood Frame	ft-	u-	Wall - Steel Frame	ft-	u-
Wall - Mass	ft-	u-	Wall - Other	ft-	u-
Ceiling	ft-	u-	Roof	ft-	u-
Ducts - Attic	ft-	u-	Ducts - Other	ft-	u-

Air Leakage Test Results

Envelope Testing Completed | Air Changes per Hour @ Pa. Duct Testing: cfm/100 ft²

Visual Inspection Only

Fenestration Ratings

Windows	u-	VT-	SHGC-		u-	VT-	SHGC-	
Weight Average	u-	VT-	SHGC-		u-	VT-	SHGC-	
Opaque door	u-	VT-	SHGC-		u-	VT-	SHGC-	
Skylight	u-	VT-	SHGC-		u-	VT-	SHGC-	
	u-	VT-	SHGC-		u-	VT-	SHGC-	
	u-	VT-	SHGC-		u-	VT-	SHGC-	
	u-	VT-	SHGC-		u-	VT-	SHGC-	
	u-	VT-	SHGC-		u-	VT-	SHGC-	

Posting Instructions

This certificate shall be completed by the builder or other approved party and posted:

- on a wall in the space where the furnace is located;
- utility room or an approved location inside the building;

Where located on an electrical panel the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels.

Where there are more than one value for each component, the certificate shall indicate the area-weighted average value or if not available, list of each value that applies to 10 % or more of the total area of that component.

This certificate developed in partnership with Xcel Energy

Who should be completing it?

Building owner, owner's authorized agent or other approved party.

SHUMS CODA ASSOCIATES Group 14 ENGINEERING BUILDTank inc.

Thermal Envelope Certificate

This Certificate is to be posted in accordance with Section C401.3 of the 2021 International Energy Conservation Code

Site Location/Address: _____ Compliance Path: _____

Designer/Builder: _____ Date Completed: _____

Insulation Rating

Floors over unconditioned space	*R-*	*U-*	Floor - Slab Edge	*R-*	*U-*
Wall - Basement	*R-*	*U-*	Wall - Crawl Space	*R-*	*U-*
Wall - Wood Frame	*R-*	*U-*	Wall - Steel Frame	*R-*	*U-*
Wall - Mass	*R-*	*U-*	Wall - Other	*R-*	*U-*
Ceiling	*R-*	*U-*	Roof	*R-*	*U-*
Ducts - Attic	*R-*	*U-*	Ducts - Other	*R-*	*U-*
_____			_____		
_____			_____		

Air Leakage Test Results

Envelope Testing Completed ☐

Visual Inspection Only ☐

_____ *Air Changes per Hour @* _____ *Pa.* *Duct Testing:* _____ *cfm/100 ft²*

Fenestration Ratings

Window	*U-*	*VT-*	*SHGC-*	_____	*U-*	*VT-*	*SHGC-*
Weight Average	*U-*	*VT-*	*SHGC-*	_____	*U-*	*VT-*	*SHGC-*
Opaque door	*U-*	*VT-*	*SHGC-*	_____	*U-*	*VT-*	*SHGC-*
Skylight	*U-*	*VT-*	*SHGC-*	_____	*U-*	*VT-*	*SHGC-*
_____	*U-*	*VT-*	*SHGC-*	_____	*U-*	*VT-*	*SHGC-*
_____	*U-*	*VT-*	*SHGC-*	_____	*U-*	*VT-*	*SHGC-*
_____	*U-*	*VT-*	*SHGC-*	_____	*U-*	*VT-*	*SHGC-*
_____	*U-*	*VT-*	*SHGC-*	_____	*U-*	*VT-*	*SHGC-*

Posting Instructions

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- on a wall in the space where the furnace is located,
- utility room or an *approved* location inside the *building*.

Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels.

Where there are more than one value for each component, *the certificate shall indicate the area-weighted average value or if not available, list of each value that applies to 10 % or more of the total area of that component.*

This certificate developed in partnership with Xcel Energy® Building Code Support Program