Tennessee Minimum Insulation Requirements for Low-Slope Commercial Roofing

The applicable building energy code that determines the minimum insulation requirements for commercial roofs with insulation entirely above the deck in Tennessee is the 2012 International Energy Conservation Code with exceptions for specific building types noted here. This code is effective August 4, 2016. The minimum insulation requirements apply both to new construction and roof replacements on existing buildings.

The current model code requirements for insulation entirely above the roof deck are 20-25% more stringent (R-25 for CZ3; R-30 for CZ4) than the State's minimum requirements. Building owners should consider exceeding the State's minimum requirements when installing a new or replacement roof system in order to improve energy efficiency and reduce operating costs.

### Minimum R-value Requirements for Insulation Entirely Above the Roof Deck

- **Climate Zone 4:** R-25ci
- **Climate Zone 3:** R-20ci

### Resources
- Polyisocyanurate Insulation Manufacturers Association
- U.S. Department of Energy

**Notes**
- **About R-value:** R-value is a measurement of a material's ability to resist heat flow. The higher the R-value, the greater the insulating power. Installers should consult data sheets provided by polyiso manufacturers for information on product-specific R-values.
- **Code Compliance:** The International Energy Conservation Code recognizes ASHRAE 90.1 as an alternate compliance option for both new construction and existing buildings.
Option #1 - R-20ci Roof Assembly

- 1.75” Polyiso Boards
- Structural Roof Deck
- Two layers of 1.75” polyiso R-20.0

Option #2 - R-20ci Roof Assembly

- 1.6” Polyiso Boards
- Structural Roof Deck
- Two layers of 1.6” polyiso R-18.2
- 0.5” HD polyiso cover board R-2.5
- Total R-20.7

Option #1 - R-25ci Roof Assembly

- 2.2” Polyiso Boards
- Structural Roof Deck
- Two layers of 2.2” polyiso R-25.2

Option #2 - R-25ci Roof Assembly

- 2.0” Polyiso Boards
- Structural Roof Deck
- Two layers of 2.0” polyiso R-22.8
- 0.5” HD polyiso cover board R-2.5
- Total R-25.3
PIMA

For more than 30 years, the Polyisocyanurate Insulation Manufacturers Association (PIMA) has served as the voice of the rigid polyiso industry, proactively advocating for safe, cost-effective, sustainable, and energy-efficient construction. Organized in 1987, PIMA is an association of polyiso manufacturers and industry suppliers. Polyiso is one of North America’s most widely-used and cost-effective insulation products.

About Polyiso Insulation

Polyiso is a rigid foam insulation used in more than 70% of commercial roof construction and offers a continuous insulation solution for commercial and residential wall assemblies. As one of North America’s most widely used and readily available building products, polyiso is a cost-effective insulation option for reducing building energy use and improving the overall service-life of roofs and walls.

For more information on polyisocyanurate insulation, visit www.polyiso.org