



SIoux FALLS, SOUTH DAKOTA

SUMMARY OF KEY RESIDENTIAL ENERGY CODE REQUIREMENTS

South Dakota is one of eight states that does not have a statewide building code. The 2021 IRC was adopted in Sioux Falls, South Dakota effective **January 1, 2022**. This document summarizes changes to the building envelope-related requirements in the updated code for Sioux Falls.



CODE CHANGE HIGHLIGHTS

- South Dakota Codified Law 11-10-10 requires a Builder's Efficiency Disclosure Statement.
- The additional energy efficiency section 1101.13.5 is not required.
- Blower door and duct leakage testing requirements have been deleted.
- Prescriptive insulation levels reduced to 2009 IECC levels throughout except for fenestration which is slightly more stringent.

BUILDING ENVELOPE REQUIREMENTS

CODE PATH	2021 IRC CODE SECTION	SIoux FALLS
Prescriptive	N1102.1.3 – Wood Frame Wall	R-20 or R-13+5 ci / U-0.057
	N1102.1.3 – Ceilings	R-49 / U-0.026
	N1102.1.3 – Basements	R-13 or R-10 ci / U-0.050
	N1102.1.3 – Crawl Space Walls	R-13 or R-10 ci / U-0.065
	N1102.1.3 – Fenestration	U-0.32

DUCT LEAKAGE (TEST NOT REQUIRED)

MEASUREMENT	CFM25 / 100 SQ. FT.
Rough-in (installed air handler)	4
Rough-in (air handler not installed)	3
Post-construction	4

AIR LEAKAGE (TEST NOT REQUIRED)

CLIMATE ZONE	MEASUREMENT
6	3ACH50

TABLE N1106.5 MAXIMUM ENERGY RATING INDEX (ERI)

CLIMATE ZONE	MAXIMUM ERI
6	54

Note: All R-values are minimums and U-factors maximums.

MORE INFORMATION ON THE SIOUX FALLS ENERGY CODE CAN BE FOUND HERE:

<https://www.siouxfalls.org/planning-dev/building/building>

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This summary is offered for informational purposes only. It does not purport to be an exhaustive analysis of code changes or provide advice that will ensure guaranteed compliance with any energy code provision. Please consult with local authorities before finalizing your installation plans.



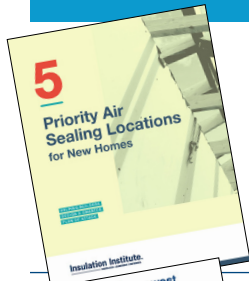
ENERGY-EFFICIENT, COST-EFFECTIVE CONSTRUCTION WITH FIBERGLASS AND MINERAL WOOL INSULATION



As code levels advance, **keep informed about innovative practices** to meet or exceed code requirements using cost-effective fiberglass and mineral wool insulation.

The following resources in the table below are just a subset of the many guides available from the **Insulation Institute** to help you achieve new performance requirements with proven approaches.

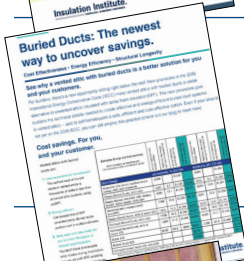
INSULATION INSTITUTE RESOURCES



Air Leakage

As states adopt more stringent energy codes, some builders may experience challenges meeting new mandatory air leakage requirements. Fiberglass and mineral wool insulation is the low-cost solution for homebuilders to meet or surpass code air leakage rate requirements of 3 or 5 air changes per hour depending on climate zone. For homeowners, an airtight building envelope results in energy savings and increased thermal comfort.

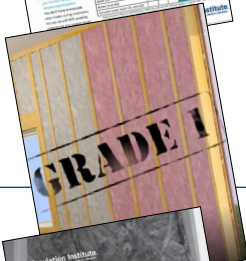
<https://insulationinstitute.org/wp-content/uploads/2018/05/N090-5-Air-Sealing-Locations-for-New-Homes.pdf>



Ducts Buried Within Ceiling Insulation

Deeply buried ducts in attics is an easy way to lower energy code compliance costs for builders using the simulated energy performance path. Homeowners can benefit from energy savings realized from lower-capacity, lower-cost HVAC systems.

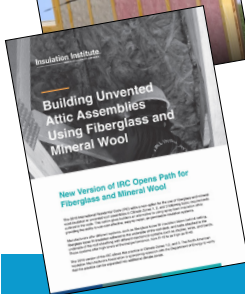
<https://insulationinstitute.org/wp-content/uploads/2019/03/N087-Buried-Ducts-The-newest-way-to-uncover-savings.pdf>



Proper Installation of Insulation

Grade I installation delivers superior energy efficiency and is increasingly required by state energy codes. Insulation installation jobs that fail to meet Grade I criteria can mean construction delays due to callbacks, HERS rating penalties, and failed code inspections. Grade I installation is readily achievable by following basic guidelines as recommended by manufacturers. NAIMA offers free online training for installers.

www.grade1insulation.org



Unvented Attics Using Fiberglass and Mineral Wool Insulation

Unvented attics can be constructed by installing fiberglass or mineral wool insulation below the roof deck instead of using more costly materials like spray foam. In addition, fiberglass and mineral wool insulation products are green certified and do not carry recommended occupancy restrictions due to product off-gassing after installation. Starting with the 2018 IRC, this practice is outlined in detail within the code. Homeowners benefit from lower construction costs and the use of a safe product.

<https://insulationinstitute.org/wp-content/uploads/2018/05/BuildingUnventedAtticAssemblies-N089.pdf>

LEARN MORE ABOUT THE ERI COMPLIANCE PATH HERE:

<https://www.energycodes.gov/technical-assistance/training/courses/2015-iecc-energy-rating-index-eri-compliance-alternative>

Get the Facts for a Stronger Business

Learn more about fiberglass and mineral wool insulation at InsulationInstitute.org



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