

CODE REFERENCE

Minnesota Insulation and R-Value Code Reference

The Minnesota Residential Energy Code's minimum R-values by assembly and climate zone, plus the fire and moisture rules specific to foam plastic insulation.

The governing code

Minnesota's insulation requirements live in Minnesota Rules Chapter 1322, the Residential Energy Code. That chapter adopts the 2012 International Energy Conservation Code as its base and layers Minnesota's own amendments on top, several of them stricter than the national baseline to account for our winters. It has been the enforced code since February 2015. The Minnesota Department of Labor and Industry opened an early rulemaking process in February 2026 proposing a future update referencing the 2024 International Residential Code's energy chapter, but as of this writing that process has no adopted rule, no hearing date, and no effective date, so the code described below remains the one every Minnesota project is actually built and inspected against.

Two climate zones

Minnesota spans two federal climate zones, and the R-value table is organized around them because the code asks more of colder ground. Zone 7 covers a band of counties across the north: Aitkin, Beltrami, Carlton, Cass, Clearwater, Cook, Crow Wing, Hubbard, Itasca, Kittson, Koochiching, Lake, Lake of the Woods, Mahnomen, Marshall, Norman, Pennington, Pine, Polk, Red Lake, Roseau, St. Louis, and Wadena. Every other Minnesota county, including the entire Twin Cities metro and our home base in Savage, sits in Zone 6.

Minimum R-values by assembly

These are minimums, not targets. A well-built project often exceeds them where it makes sense, but every number below is a floor a home has to clear at inspection, under Minnesota Rules 1322.0402 (Table R402.1.1, as amended).

Assembly	Zone 6 (incl. Twin Cities / Savage)	Zone 7 (northern counties)
Ceiling / Attic	R-49	R-49
Above-Grade Wood Frame Wall	R-20 cavity, or R-13 cavity + R-5 continuous	R-21 cavity
Floor Over Unconditioned Space*	R-30, or fill cavity (R-19 min.)	R-38, or fill cavity (R-19 min.)
Basement Wall	R-15	R-15
Slab Edge	R-10, extending 3.5 ft below grade	R-10, extending 5 ft below grade
Crawl Space Wall	R-15	R-15

*Applies to floors over garages, crawl spaces, and other unconditioned areas. Rim joist and band joist assemblies are treated as part of the wall assembly in most editions of the code; confirm the current, exact figure that applies to your project with your local building official.

Source: Minnesota Rules 1322.0402, Table R402.1.1, as amended. www.revisor.mn.gov/rules/1322.0402/

Rules specific to foam plastic insulation

Meeting an R-value is only part of the code. Spray foam is a foam plastic insulation, and the Minnesota Residential Code adds fire-safety and moisture-control rules on top of the energy table above, under Section R316.

- **Thermal barrier.** Under Section R316.4, foam plastic has to be separated from the occupied interior by an approved thermal barrier, typically half-inch gypsum wallboard, unless the assembly is tested to NFPA 275 instead.
- **Ignition barrier exceptions.** Unoccupied attics and crawl spaces entered only for repairs or maintenance can use a lighter ignition barrier in place of the full thermal barrier. Masonry, concrete, and certain roof assemblies have their own narrow exceptions.
- **Flame spread and smoke rating.** Foam plastic itself has to test at a flame spread index of 75 or less and a smoke-developed index of 450 or less under ASTM E84, before any thermal barrier is even considered.
- **Vapor retarder.** In Zones 6 and 7, the code calls for a Class I or Class II vapor retarder on the interior side of frame walls, under Section R702.7. Closed-cell spray foam applied at the right permeance and thickness can meet this requirement on its own in many wall assemblies, but the specific assembly still has to be checked.

Sources: Minnesota Residential Code, Section R316, Foam Plastic, and Section R702.7, Vapor Retarders (adopted from the International Residential Code with Minnesota amendments).

Why this matters

The R-value and vapor-retarder requirements are not one-size-fits-all. They change by assembly and by climate zone, and getting them wrong can mean a failed inspection, a moisture problem hidden inside a wall for years, or a house that never performs the way it should. This reference is provided so you know exactly what a Minnesota project is required to meet. Local jurisdictions and individual site conditions can add requirements on top of these numbers, and code editions change over time, so always confirm the current requirement with your building official before a permit is pulled.