

A Smarter Wall for Your New Home

Continuous exterior insulation technology used in this home's construction

This home was built using a **FoamShield® continuous insulation wall assembly** — a proven approach that wraps the entire exterior of the wood-frame structure in a solid layer of rigid foam insulation, rather than relying only on insulation tucked between the wall studs. The result is a home that is more comfortable, more efficient to heat and cool, and more resistant to moisture problems over time.

How the Wall System Works

In a conventional wall, insulation sits only between the studs, leaving the studs themselves as weak points where heat escapes and cold, moisture-prone surfaces can form. FoamShield® takes a different approach:

- A continuous layer of rigid Korolite® EPS foam insulation wraps the **outside** of the wall framing, eliminating the gaps and cold spots common in standard construction.
- A weather-resistant membrane beneath the foam manages air, water, and vapor, so no separate interior vapor barrier is needed.
- A rainscreen gap behind the exterior cladding lets any moisture drain away and the wall dry outward.
- The wood framing stays close to indoor temperature year-round, which greatly reduces the risk of hidden condensation, mold, and rot inside the walls.

What This Means for You as a Homeowner

Lower energy bills	A continuous, gap-free layer of insulation reduces heat loss year-round, which translates into lower heating and cooling costs compared to standard-built homes.
Consistent comfort	Fewer cold spots and drafts near exterior walls, and steadier indoor temperatures room to room.
Healthier indoor air	By keeping the wall structure warm and dry, the system greatly reduces the conditions that lead to mold, mildew, and poor indoor air quality.
Built to last	The foam insulation and rainscreen design protect the wood structure from moisture damage, supporting a longer service life for the walls.
Future-ready efficiency	This wall assembly is designed to meet higher performance building code targets, including Net-Zero Ready and advanced energy step codes, helping protect the home's value as energy standards rise.

Performance Snapshot

Example figures below are drawn from an energy model of a comparable single-family home built to this wall system, targeting BC Step Code 5 / Net-Zero Ready performance:

R-20	R-24	57.8%
Effective wall insulation value with 4" of exterior foam over standard 2x4 framing	Achievable with 5" of exterior foam for even higher performance	Better heat-loss performance than the reference home used for code comparison

TEDI (Thermal Energy Demand Intensity) measures how much heating energy a home needs per square metre each year — lower is better. This example home reached 27 kWh per square metre per year.

Insulation Thickness & Effective R-Value

The table below shows how the wall's overall insulating performance (effective R-value, including framing, sheathing, and air films) scales with the thickness of exterior foam insulation used:

Exterior Foam Thickness	Effective R-Value (Standard EPS)	Effective R-Value (Graphite-Enhanced EPS)
3"	R-16	R-18
3.5"	R-18	R-20
4"	R-20	R-22
4.5"	R-22	R-25
5"	R-24	R-27
6"	R-28	R-32
7"	R-32	R-37

Higher R-values mean better insulating performance. Your builder can confirm the exact insulation thickness and type used in this home.

Good to Know

- This is an established, code-recognized wall assembly — not an experimental product — already used across a range of climates and building types.
- Almost any exterior cladding style (siding, board and batten, panel systems, and more) can be used with this wall system, so the home's exterior look isn't limited by the technology underneath.
- Because there's no insulation batts to install between the studs, indoor humidity can be maintained comfortably even during cold weather without the condensation risk found in some conventional walls.

This handout summarizes publicly available manufacturer information on the FoamShield® wall assembly and Korolite® insulation system for general buyer reference. Ask your builder or sales representative for the specific insulation thickness, R-value, and energy performance details confirmed for this home.

Source: airfoam.com/foamshield-perfect-walls-insulation.php — FoamShield® and Korolite® are registered trademarks of their respective owner.