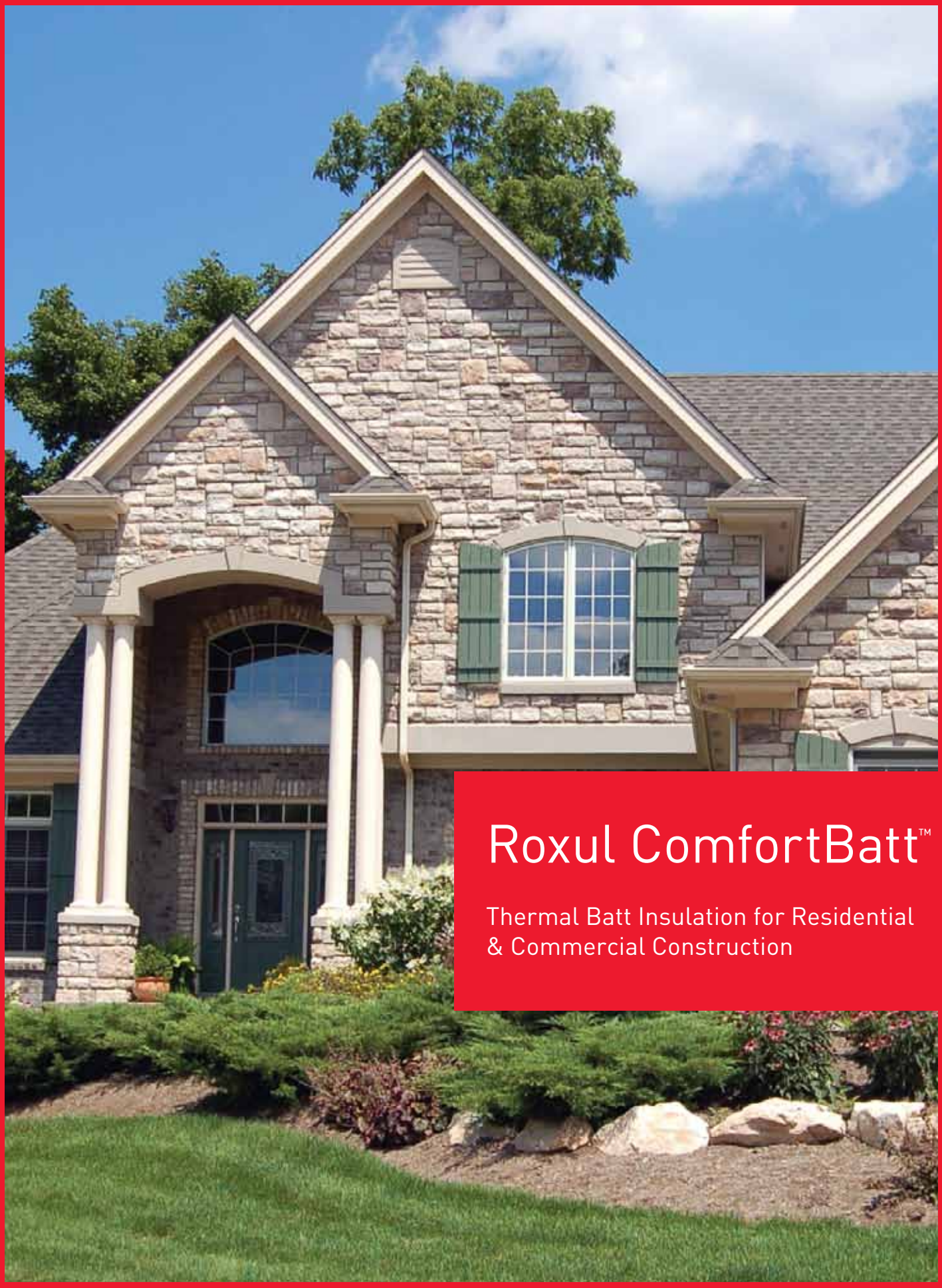


Roxul ComfortBatt™

Thermal Batt Insulation for Residential & Commercial Construction

ROXUL®
The Better Insulation™

Superior Building Envelope Performance

Roxul Comfortbatt™ is a semi-rigid batt insulation designed specifically for wood and steel stud applications for residential and commercial construction. The stone wool-based insulation is made from natural stone and 75% recycled content, which gives it properties that other insulation can't match. It also offers superior acoustical performance to wall assemblies and floors and can be used in acoustic applications required by building code.

Fire-Safe Insulation For Wall Assemblies – Won't Burn or Develop Smoke

Roxul ComfortBatt stone wool insulation is non-combustible as determined by ASTM E136 and CAN4-S114. It will not develop smoke or promote flame spread, even when directly exposed to fire, as most other insulation materials will.

- Extremely high melting point of 1177 °C (2150 °F)
- Does not produce smoke or toxic gases in the event of a fire
- Excellent barrier against the spread of flames to help protect occupants and reduce property damage
- Eliminates the risk of insulation accidently catching fire during installation
- Excellent Passive Fire Protection – ComfortBatt can add up to an additional 15 minutes of fire protection to wall assemblies

Fire Test Performance

CAN/ULC-S702-09	Mineral Wool Thermal Insulation for Buildings	Type 1, Complies
CAN4-S114	Determination of Non-Combustibility	Non-Combustible
ASTM E 136	Determination of Non-Combustibility	Non-Combustible
CAN/ULC S102	Surface Burning Characteristics	Flame Spread = 0 Smoke Developed = 0
ASTM E 84	Surface Burning Characteristics	Flame Spread = 0 Smoke Developed = 0
NBC 2010, Article 9.25.2.2	Insulation Materials	Conforms
CCMC Evaluation Listing	Master Format 07212: Mineral Wool Batt Insulation	12018-L

NFPA® MEMBER 2010-2011

The Insurance Bureau of Canada (IBC) reference to NFPA 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components has led to several rainscreen wall system manufacturers to test with Roxul cavity wall insulation. The use of SPUF insulation does not allow rainscreen manufacturers to meet this requirement.

Performance Matters: Managing Moisture In Wall Assemblies

Roxul ComfortBatt is an unfaced semi-rigid batt insulation and a vapor retarder may be required by building code depending on the geographic location of the building.

The use of a vapor retarder will limit the amount of water vapor that will move to the outside wall – reducing condensation in the wall assembly. Even a small hole in the vapor barrier can have a detrimental effect on the performance of the wall and insulation.

- When insulation material such as fiberglass gets wet, it can absorb moisture, reducing R-value and presenting the risk of slumping and sagging within the wall cavity.
- Roxul ComfortBatt does not absorb water and has a low water sorption rate. It will maintain its shape within the wall cavity ensuring maximum R-value is maintained.
- Roxul ComfortBatt is resistant to water, rot, mold, mildew and bacterial growth.
- Wall assembly construction is not perfect, but Roxul ComfortBatt can minimize moisture risk.

Compliance & Specification › 2lbs/ft^3 32kgs/m^3

R14/15	89 mm	5.9kgs/m^2
R22/23	150 mm	4.8kgs/m^2
R28/30	184 mm	2.8kgs/m^2
Density	ASTM C 612-00 – 32 kg/m^3 (2 lbs/ft^3) 89 mm = 2.8kgs/m^2	
Fire	CAN/ULC s102 Surface Burning Characteristics Flame Spread = 0 Smoke Developed = 0	
Moisture Resistance	ASTM C 1104 Moisture Sorption 0.03%	

Better Fit Equals Better Wall Performance

To ensure the labeled R-value is achieved, batt insulation in wood and steel stud wall cavities must be gap-free and void-free. Gaps and voids are most prevalent around electrical boxes, wires and pipes.

Roxul ComfortBatt is produced at a slight over-thickness to ensure a friction fit within the wall cavity. The batts will stay in place and perform equally well in horizontal, sloped, dormer, vertical and overhead applications.

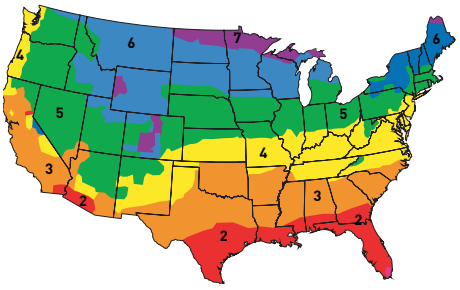
Roxul ComfortBatt's unique flexible edge ensures the semi-rigid batts compress and expand between studs and joists to eliminate slumping or sagging and conform to off-standard wood studs.

Higher density batts reduce airflow within the wall cavity, reducing convective losses. This translates into a better performing and more comfortable thermal wall.

Roxul cuts **quickly and accurately** with a serrated knife, such as a bread knife, so you can easily achieve **optimal fit around pipes, electrical boxes, wiring, ductwork, and between studs and joists** that are less than a standard width.

Studies have proven that wall assemblies with gaps and voids can result in **35% loss** of the stated R-value. Roxul ComfortBatt's higher density batts make it simple for precise cutting to ensure a fit without gaps and voids.

US Department of Energy (DOE) R-Value Recommendation



All of Alaska in Zone 7 except for the following Boroughs in Zone 8: Bethel, Dellingham, Fairbanks N. Star, Nome, North Slope, Northwest Arctic, Southeast Fairbanks, Wade Hampton, Yukon-Koyukuk

Zone 1 Includes: Hawaii, Guam, Puerto Rico, and the Virgin Islands

Zone	Heating System	Attic	Cathedral Ceiling	Wall: Cavity	Wall: Insulation Sheathing	Floor
1	All	R30 to R49	R22 to R15	R13 to R15	None	R13
2	Gas, oil, heat pump	R30 to R60	R22 to R38	R13 to R15	None	R13
2	Electric furnace	R30 to R60	R22 to R38	R13 to R15	None	R19-R25
3	Gas, oil, heat pump	R30 to R60	R22 to R38	R13 to R15	None	R25
3	Electric furnace	R30 to R60	R22 to R38	R13 to R15	R2.5 to R5	R25
4	Gas, oil, heat pump	R38 to R60	R30 to R38	R13 to R15	R2.5 to R6	R25 to R30
4	Electric furnace	R38 to R60	R30 to R38	R13 to R15	R5 to R6	R25 to R30
5	Gas, oil, heat pump	R38 to R60	R30 to R38	R13 to R15	R2.5 to R6	R25 to R30
5	Electric furnace	R38 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30
6	All	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30
7	All	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30
8	All	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30

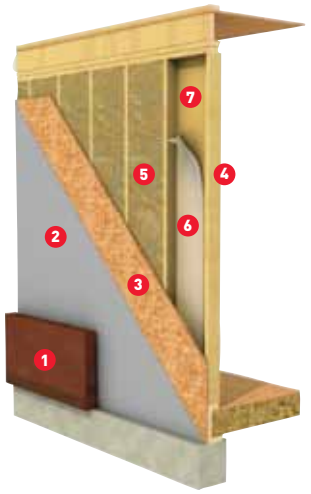
Provincial Building Code Requirements for Canada

Province	Zone	Heating Type	Ceiling		Exterior Walls	Exposed Floors	Basement Walls	Foundation Depth bg	Crawl Space
			Attic R-Value	Joist R-Value	R-Value	R-Value	R-Value	ft	R-Value
BC	<=3500DD	gas	40	28	20	28	12	2	20
BC		electric/oil	40	28	20	28	12	2	20
BC	<4500DD	all	44	28	20	28	12	2	20
BC	<=4500DD	all	52	28	22	28	12	2	22
AB*	9.25.2.1		R34	R34	R12	R20	8		R8
SK	National Building Code of Canada**								
MB	<53 degrees Lat	gas	40	28	20	32	12	2	
MB		electric/oil	40	28	20	32	12	2	
MB	<53 degrees Lat	all	50	28	26	32	24	2	
ON	1	gas/oil	40	28	19	25	12	full height	
	(<5000DD)	electric	50	28	29	25	19	full height	
	2	gas/oil	40	28	24	25	12	full height	
	(>5000DD)	electric	50	28	29	25	19	full height	
QC	A	all***	30	30	19	27	12	full height	12
	B	all***	32	32	20	27	19	full height	12
	C	all***		34	22	27	12	full height	12
	D	all***		36	23	27	12	full height	12
	E	all***		39	24	27	12	full height	12
	F	all***		40	26	27	12	full height	12
NS	All		40	31	24	31	20		20
PEI, NF, NB YT. NWT,NU	All	National Building Code of Canada**							

Insulation levels are nominal R-values, not effective values for assembles. *In AB, highrise construction follows the National Building Code of Canada.
**National Building Code of Canada has no specific insulation requirements except that insulation be used to prevent condensation. The National Building Code does not recommend using the Model National Energy Code for Houses (MNECH). Provinces using the National Building Code usually impose some non energy related, modifications.
***Quebec Total assembly R-value requirements between framing members. Model National Energy Code for Buildings scheduled upgrade for expected release 2011.

Ideal Applications for ComfortBatt™ Insulation

Roxul ComfortBatt's higher density ensures a snug friction fit in the wall cavity. Note: A vapor retarder may be required in the wall assembly, depending on the geographical location of the building.

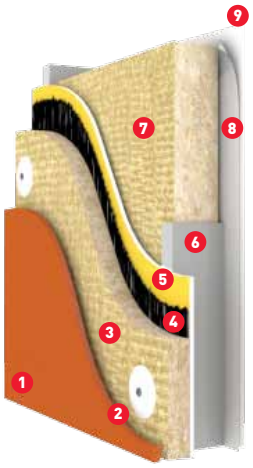


The ComfortBatt Residential Wall Assembly

(shown from outside to inside)

1. Cladding
2. Air Barrier
3. Sheathing
4. 2" x 6" Wood Studs
5. 5.5" ComfortBatt
6. Vapor Retarder
7. Gypsum

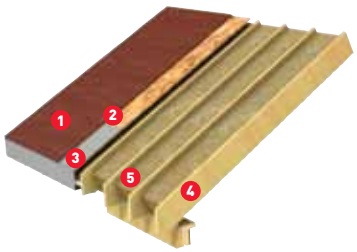
In addition to residential applications, Roxul ComfortBatt is ideal as a component of the BEDR cavity wall system.



BEDR Wall Components (shown from outside to inside)

1. Terra Cotta Cladding
2. 1" Air Space (1/2" minimum)
3. 1"-2" CavityRock MD Insulation (R4.2–R8.4) or 2.5"–5" CavityRock DD (R10.75–R21.5)
4. Permeable Air Barrier
5. Exterior Gypsum Board
6. 3.5" or 6" Steel Stud
7. 3.5" or 6" ComfortBatt Insulation
8. Vapor Barrier
9. 5/8" Gypsum Board

When insulating attics, use two layers of ComfortBatt to achieve the required R-value. The bottom layer should run parallel to the joists and the top layer run in the opposite direction. For attics and cathedral ceilings, only a single layer of ComfortBatt is required between the roof trusses.



The ComfortBatt Roof/Attic Assembly

(shown from outside to inside)

1. Shingles
2. Tar Paper
3. Sheathing
4. 2" x 10" Roof Trusses
5. ComfortBatt (R28/R30)
6. Ceiling Joists
7. ComfortBatt (R22/R23 or R28/R30) two layers running perpendicular

A Range of Roxul ComfortBatt Products to Suit all your Building Requirements

	R-Value	RSI Value	Stud/Joist Type	Thickness	Width	Length	Coverage Sq. Ft. (per bag)
Canada	R14	2.47	Wood	3.5"	15.25"	47"	59.7
	R14	2.47	Wood	3.5"	23"	47"	60.1
	R14	2.47	Steel	3.5"	16"	48"	65.0
	R14	2.47	Steel	3.5"	24.25"	48"	64.7
	R22	3.87	Wood	5.5"	15.25"	47"	39.8
	R22	3.87	Wood	5.5"	23"	47"	37.5
	R28	4.92	Wood	7.25"	15.25"	47"	29.9
	R28	4.92	Wood	7.25"	23"	47"	30.0
US*	R15	2.64	Wood	3.5"	15.25"	47"	59.7
	R15	2.64	Wood	3.5"	23"	47"	60.1
	R15	2.64	Steel	3.5"	16.25	48"	65
	R15	2.64	Steel	3.5"	24.25"	48"	64.7
	R23	4.05	Wood	5.5"	15.25"	47"	39.8
	R23	4.05	Wood	5.5"	23"	47"	37.5
	R30	5.28	Wood	7.25"	15.25"	47"	29.9
	R30	5.28	Wood	7.25"	23"	47"	30.0
Canada and US*	R10	1.76	Steel	2.5"	16.25	48"	86.7
	R10	1.76	Steel	2.5"	24.25	48"	97
	R22.5	3.96	Steel	6.0"	16.25	48"	43.3
	R22.5	3.96	Steel	6.0"	24.25	48"	40.4
	R24	4.22	Steel	6.0"	16.25	48"	43.3
	R24	4.22	Steel	6.0"	24.25	48"	40.4

*Roxul ComfortBatt™ Thermal Insulation products have been tested and certified by BHFTI (The Bureau of Home Furnishings and Thermal Insulation). The Bureau is a government body under the California Department of Consumer Affairs that certifies thermal insulation performance and conducts periodic compliance testing of sample.

Children & Schools GREENGUARD® Indoor Air Quality Certified

Roxul ComfortBatt and GREENGUARD® Children & Schools Certification.

The GREENGUARD Environmental Institute (GEI) is a non-profit organization that oversees the GREENGUARD Children & Schools standards. The GEI's mission is to protect human health and quality of life through programs that improve indoor air that people breathe. They offer strict certification criteria for products intended for use in schools, daycares or other environments where children spend significant periods of time. Roxul ComfortBatt products are certified to this standard and are recognized by the United States Green Building Council's (USGBC) LEED® program. ComfortBatt is also recognized by CaGBC (Canadian Green Building Council).

Roxul ComfortBatt Green Manufacturing Report Card

Using Roxul insulation products is one of the most cost-effective ways to make homes and buildings across North America more energy efficient. But the company's commitment to the environment goes beyond the benefits of the products themselves. It extends to the way the insulation is made, as well. Roxul's newest manufacturing facility in Milton, Ontario utilizes state-of-the art technologies to eliminate waste, reduce energy consumption and minimize the company's impact on the planet in five critical "green" areas.

1. Recycling and Waste Reduction

Our new plant has an innovative recycling system that turns all production waste into new raw materials to be reused in the process. Roxul insulation now contains up to 75% recycled materials. The facility recycles over 99% of its production waste, which dramatically reduces the impact on local landfill sites.

2. Water Conservation

Water used in the manufacturing process is collected and reused for production. Storm water from the plant site is also collected and used in the production process. This significantly reduces the amount needed from municipal drinking water resources.

3. Energy Efficiency

Heat generated during our production process is captured and recycled throughout the factory and warehouse for warmth during cold weather. Energy efficient lighting has been installed throughout the facility.

4. Lower Vehicle Emissions

A strict no-idle policy for trucks and other vehicles at the facility minimizes exhaust emissions.

5. Air Quality

Roxul uses advanced emission control technology to ensure manufacturing emissions are lower than the air quality standards set and regulated by the Ontario Ministry of the Environment (MOE). In all instances, the Roxul facility is significantly below MOE levels.

A Global Leader

Roxul Inc. is part of Rockwool International, the largest producer of stone wool insulation, which is made from natural basalt rock and recycled material.

Rockwool International was founded in 1909 and today operates worldwide with more than 8,500 employees, with 25 factories across three continents.

Rockwool has more than 40 years experience in developing and manufacturing advanced wall system products. For more than 20 years, Roxul has been serving the North American market.

In addition to thermal insulation for residential and commercial construction, Roxul also manufactures a range of other premium insulation products for multiple applications.

Roxul is the Better Insulation

Roxul ComfortBatt™ is an innovative insulation offering a world of green features. When Roxul is the specified insulation, green building developers can earn a variety of LEED® (Leadership in Energy and Environmental Design) points across four key categories toward sustainable development.

Environmentally Sustainable

Our stone wool production process utilizes some of the most advanced technology available. The Roxul facility is designed to capture and recycle rainwater, reduce energy consumption, and create zero waste to landfill by recycling raw materials back into the production process.

Roxul insulations are created using naturally occurring, inorganic raw materials and materials with a high-recycled content. Stone wool insulation is non-combustible and achieves its thermal performance without the use of blowing agents. The products do not off-gas and are fully recyclable, therefore contributing to a sustainable environment.

Roxul is pleased to have third-party certification of our products' recycled content for our Milton facility, completed by **ICC-ES SAVE**™. All Roxul products produced in the Milton facility contain a minimum of **75% recycled content.** Our Milton facility is certified to produce products containing up to 93% recycled content. For further details, contact your Roxul Sales Representative. Roxul products produced in our Grand Forks facility are currently under ICC-ES SAVE™ Certification review. Please visit **www.roxul.com** for the latest information.

*Contact us for details.

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Fire Resistant · Water Repellent · Sound Absorbent · Saves Energy · Made from Stone

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