



Building Envelope Design using ROXUL® (BEDR™)

COMFORTBOARD™ CIS

High Performance Non-Combustible
Commercial Insulated Sheathing

ROXUL COMFORTBOARD™ CIS Creates Breathable Wall Systems

ROXUL® COMFORTBOARD™ CIS (Commercial Insulated Sheathing) is a rigid, high density, non-combustible, stone wool insulation board designed for use as an exterior continuous insulation in commercial applications.

COMFORTBOARD CIS is a thermally efficient, moisture resistant, vapor permeable board and takes the place of other external sheathing insulations to create high performance wall assemblies that are effective against fire, moisture thermal bridging and allow for superior drying potential.

This high density board provides the rigidity and durability needed for many exterior cladding assemblies, such as lightweight metal and composite panels systems. COMFORTBOARD CIS is available in standard thicknesses of 1", 1.25", 2", 2.5" and 3" with R-values ranging from R4 to R12.

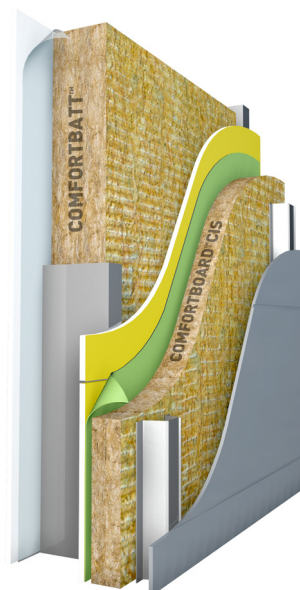
A True Continuous Insulation

In commercial steel stud applications, thermal bridging plays a large part in heat loss, leading to increased energy consumption. This assembly provides a true continuous insulation, when combined with ROXUL COMFORTBATT® Steel Stud insulation in the stud wall to form a high performance, split insulation wall system. COMFORTBOARD CIS has superior compressive resistance and is compatible with light-weight hat channel supported cladding systems, eliminating the need for Z-furring strips which can cause thermal bridging. This allows for a reduced overall thickness of the wall system and greatly improves the energy efficiency of the building.

COMFORTBOARD CIS provides maximum thermal performance, fire resistance and drying potential using sustainable materials.

Product Details

Product	Density	Standard Thickness	R-value	Standard Dimensions W x L
COMFORTBOARD CIS	ASTM C 165-00 Actual 11 lb/ft ³ , [176 kg/m ³]	1", 1.25", 2.0", 2.5", 3"	R4, R5, R8, R10, R12	24" x 48" [610 mm x 1219 mm] 48" x 72" [1219 mm x 1829 mm]



- ✓ Vapor Permeable
- ✓ Non-combustible
- ✓ Environmentally Sustainable
- ✓ Moisture Resistant
- ✓ Stable Long-Term R-Value
- ✓ Dimensionally Stable
- ✓ UV Resistant
- ✓ Sound Absorbent

The ROXUL® BEDR Wall Rainscreen System is ideal for metal panel systems and is comprised of a high density, rigid COMFORTBOARD CIS board in the external cavity, combined with ROXUL thermal COMFORTBATT™ insulation in the exterior stud wall cavity.

Thermal Resistance

Product	Temperature	R-value/inch	RSI value/25.4
ASTM C 518 [C 177]	25° F (-4° C)	4.3 hr.ft ² .F/Btu	0.74 m ² K/W
	40° F (4° C)	4.2 hr.ft ² .F/Btu	0.72 m ² K/W
	75° F (24° C)	4.0 hr.ft².F/Btu	0.70 m²K/W
	110° F (43° C)	3.6 hr.ft ² .F/Btu	0.64 m ² K/W

Compressive Strength

Product		
ASTM C 165	at 10%	1220 psf [58.5 kPa]
	at 25%	1880 psf [90.0 kPa]



Energy Efficient/ Vapor Permeable

The trend toward energy efficiency is driving the need for high performance building envelopes. These advanced wall systems are designed to produce higher effective R-values and minimize air leakage. This increases the need to design walls more carefully and reduce the risk of trapping moisture.

COMFORTBOARD™ CIS vapor permeable exterior insulation enables high performance wall systems to have superior drying potential, minimizing the risk of condensation and water accumulation. The vapor permeance of ROXUL insulation allows for increased drying potential or “breathability” without trapping transient moisture in the assembly. Foam plastic insulations have low vapor permeability and can work as vapor retarders. This may trap moisture within the wall leading to mold or premature deterioration of building components.

Moisture Resistance

Product		
ASTM C 1104	Moisture Sorption	0.28 %
ASTM E 96	Water Vapor Transmission, Desiccant Method]	2160 ng/Pa.s.m ² (35 perm)
ASTM C 209	Water Absorption	1.2 %

Fire Resistant

COMFORTBOARD™ CIS is non-combustible, able to withstand temperatures up to 2150°F (1177°C), and does not produce smoke or propagate flames. This provides a critical line of defense, keeping occupants safe and reducing property damage in the event of a fire.

Dimensionally Stable

Metal panel cladding assemblies are subject to wide temperature changes from the exterior. This can cause shrinking and expanding in other insulation materials resulting in gaps and significant heat loss in cold temperatures and vice versa in warm temperatures. COMFORTBOARD CIS remains dimensionally stable behind the assembly wall and does not expand, contract or bow with thermal cycles. This provides for a long term energy efficient wall assembly.

Fire Performance

Product		
CAN4 S114	Test for Non-Combustibility	Non-Combustible
ASTM E84 (UL 723)	Surface Burning Characteristics	Flame Spread = 0 Smoke Developed = 0
CAN/ULC S102	Surface Burning Characteristics	Flame Spread = 0 Smoke Developed = 0



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 9,700 employees, with 27 factories across three continents.

ROCKWOOL has more than 40 years experience in developing and manufacturing advanced wall system products. For 25 years, ROXUL has been serving the North American market.

In addition to high temperature insulation for industrial applications, ROXUL also manufactures a range of other premium insulation products for multiple applications.

ROXUL is the Better Insulation

ROXUL® COMFORTBOARD™ CIS 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.

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 40% recycled content. ROXUL products produced in our Grand Forks facility are currently awaiting ICC-ES Save™ certification.



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Fire
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