

DESCRIPTION & USE

Lexcor's Isolex™ family of polyisocyanurate ("polyiso") roof insulations offer the building owner the perfect combination of features so important for long-term performance. Aside from enhanced energy savings and the other benefits shown below, Isolex provides excellent initial installation cost as well as attractive life cycle payback rates.

FEATURES & BENEFITS

- **High R-Value** - Polyiso is one of the most thermally efficient insulations on the market today. It's high Rvalue "per inch" means a cost effective solution for any building application.
- **Dimensionally Stable** - With high compressive strength and dimensional rigidity, Isolex provides a stable building panel that helps resist installation traffic, supports fastener loads and reduces thermal deck movement.
- **Highly Compatible** - Isolex may be used with virtually all types of roofing systems and is a key component of a fire resistive roof assembly.
- **Environmentally Friendly** - Isolex is HCFC free and has zero ozone depletion potential.
- **The Backing of Lexcor** - One of Canada's oldest suppliers to the commercial roofing industry. No other company can match Lexcor's breadth of experience in Canadian industrial roofing.

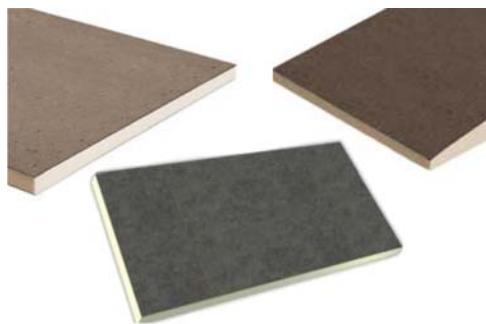
PRODUCT

Isolex™

Lexcor's Isolex™ is a closed cell polyisocyanurate foam core panel, integrally laminated to heavy, black (non-asphaltic) fibre reinforced felt facers. It is recommended for use under single ply, modified bitumen and built-up roof systems. Isolex™ is available in two panel sizes: 122 cm x 122 cm (4' x 4') and 122 cm x 244 cm (4' x 8'). It is also available in a 25 psi formulation ("Isolex-25") for superior compressive strength.

Isolex™ II

Isolex™ II is a closed cell polyisocyanurate foam core panel, integrally laminated to heavy, durable and dimensionally stable inorganic coated-glass facers. It is offered in a variety of thicknesses, providing long-term thermal resistance (LTTR) values from 6.0 to



25.0. It is typically specified for BUR, modified bitumen and single-ply membrane systems. It is also available in a 25 psi formulation and in either 122 cm x 122 cm (4' x 4') or 122 cm x 244 cm (4' x 8') panel sizes.

Isolex™ Tapered

Isolex™ Tapered is the Isolex™ insulation specially manufactured in a tapered profile to provide positive drainage while maintaining high thermal efficiency. Available slopes range from 1/8" per foot to 1/2" per foot.

Isolex™ Tapered is optionally available with a 12 mm (1/2") fibreboard laminate or in a 25 psi density. Panels are only available in the 122 cm x 122 cm (4' x 4') sizes.

Isolex™ Recover Board

Isolex Recover Board is specifically designed for use with single ply systems as well as modified bitumen or built-up roofing systems. Its primary function is to provide an improved substrate for the roofing membrane in recover applications. Panels are available in either 122 cm x 122 cm (4' x 4') or 122 cm x 244 cm (4' x 8') panel sizes.

TECHNICAL DATA

Many features that designers need when specifying insulation are offered by polyiso insulation: excellent fire test performance, dimensional stability, compressive strength, moisture resistance, extensive building code approvals, cost effective insurance ratings, superior R-values and thermal performance, and compatibility with commonly used construction adhesives and solvents.

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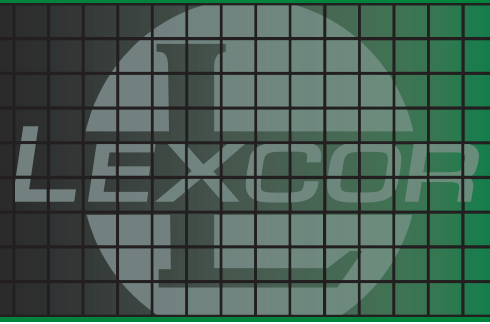
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ISOLEX INSULATIONS



Standard Thicknesses, LTRR-Values & Span Data

Nom. Inches	Thickness mm	LTRR	RSI ²	Flute Spanability Inches	mm
1.0	25	5.6	0.99	2 5/8	67
1.1	88	6.2	1.09	2 5/8	67
1.2	30	6.7	1.19	2 5/8	67
1.3	33	7.3	1.29	2 5/8	67
1.4	36	7.9	1.39	2 5/8	67
1.5	38	8.5	1.49	4 3/8	111
1.6	40	9.1	1.59	4 3/8	111
1.7	43	9.6	1.70	4 3/8	111
1.8	46	10.2	1.80	4 3/8	111
1.9	48	10.8	1.90	4 3/8	111
2.0	51	11.4	2.01	4 3/8	111
2.1	51	12.0	2.11	4 3/8	111
2.2	53	12.6	2.22	4 3/8	111
2.3	56	13.2	2.32	4 3/8	111
2.4	58	13.8	2.43	4 3/8	111
2.5	64	14.4	2.53	4 3/8	111
2.6	66	15.0	2.64	4 3/8	111
2.7	69	15.6	2.74	4 3/8	111
2.8*	71	16.2	2.85	4 3/8	111
2.9*	74	16.8	2.96	4 3/8	111
3.0*	76	17.4	3.06	4 3/8	111
3.1*	79	18.0	3.17	4 3/8	111
3.2*	81	18.6	3.28	4 3/8	111
3.3*	84	19.2	3.39	4 3/8	111
3.4*	86	19.9	3.50	4 3/8	111
3.5*	89	20.5	3.61	4 3/8	111
3.6*	91	21.1	3.72	4 3/8	111
3.7*	94	21.7	3.82	4 3/8	111
3.8*	97	22.3	3.94	4 3/8	111
3.9*	99	23.0	4.05	4 3/8	111
4.0*	102	23.6	4.16	4 3/8	111

LTRR (long term thermal resistance) values were determined in accordance with CAN/ULC-S770-09. Test samples were third-party selected and tested by an accredited material testing laboratory. The LTRR results were reviewed by FM Global and certified by the PIMA Quality Mark Program.

²RSI is the metric expression of Rvalue ($m_2 \cdot K/W$).

*Multi-layer application is strongly recommended when the total insulation thickness exceeds 2.7"

Physical Properties

PROPERTY	ASTM TEST	TYPICAL RESULTS	
		20 psi	25 psi
Dimensional Stability	D 2126	<2% linear change	<2% linear change
Compressive Strength	D 1621	140 kPa (20 psi)	172 kPa (25 psi)
Water Absorption	D 2842, C 209	<1%, <3.5%	<1%, <3.5%
Moisture Vapour Transmission	E 96	<1.5% Perm (86ng/Pa•s•m ²)	<1.5% Perm (86ng/Pa•s•m ²)
Flame Spread	E 84 (10 min.)	40-60 ¹	40-60 ¹
Smoke Development	E 84 (10 min.)	50-170 ¹	50-170 ¹
Sevice Temp.		-73°C to 121°C -100°F to 250°F	-73°C to 121°C -100°F to 250°F

¹ Numerical ratings are not intended to reflect performance under actual fire conditions. Flame spread index of ≤ 75 and smoke development ≤ 450 meet code requirements for foam plastic roof insulation. Codes exempt foam plastic insulation when used in FM 4450 or UL 1256. Physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation.

APPROVALS & COMPLIANCES

- ASTM C1289, Type II, Class 1, Grade 2 (20 psi) or Grade 3 (25 psi)
- CAN/ULC-S704, Type 2, Class 3 or Type 3, Class 3
- CCMC No. 12464-L
- UL Certified for Canada – Insulated Roof Deck Assemblies Construction No. C38 and 52, Meet CAN/ULC-S126, CAN/ULC-S101 and CAN/ULC-S107
- UL Standard 1256 Classification – Construction No. 120, 123 & 292
- UL Standard 790 (ASTM E108) Roofing Systems Classification
- UL Standard 263 (ASTM E119) Fire Resistance Classification
- UL Standard 1897 Uplift Resistance
- FM Standard 4450/4470 Approved - Refer to FM Approvals® RoofNav for Specific System Details
- IBC Chapter 26 & NBC Sections on Foam Insulation
- California State Insulation Quality Standards and Title 25 Foam Flammability Criteria (License #TC 1231)
- Miami-Dade County Approved
- State of Florida Product Approval (FL6796)

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PRODUCT INSTALLATION

Before installing the insulation, the roof deck should be firm, well attached, even, clean and dry. Proper attachment of the insulation is necessary to prevent roof failures. Lexcor will not be responsible for any damage caused by improper attachment. Lexcor Iso products can be attached to decks that are approved by Factory Mutual and/or local code agencies. The responsibility for determining deck suitability is that of the designer/specifier and/or the building owner's representative. Although Lexcor Iso products have been designed to withstand normal construction traffic, protection from damage by such traffic and/or abuse is extremely important. Surface protection such as plywood must be used in areas where heavy and/or repeated traffic is anticipated both during and after installation.

Moisture Vapour Control

Vapour retarders are recommended to prevent water vapour from passing into and damaging the insulation and roofing system. All Lexcor Iso Insulation products may be installed with or without a vapour retarder, the need for which is determined by the designer. Consult the Lexcor Technical Department at (800) 268-2889 for additional information and assistance. Concrete and poured gypsum decks require special consideration to handle the large amounts of inherent moisture. Vapour retarders are strongly recommended over these decks.

Multi-Layer Application

Where possible, a two-layer application of Isolex is strongly recommended. The joints in each layer should be offset in order to avoid a vertically continuous joint through the total insulation thickness. Two layers (or more) with joints staggered can provide improved insulation performance by eliminating thermal bridges. This method also reduces condensation potential and thermal stress on the roof membrane.

Mechanical Attachment

Mechanical fastening is the preferred method of attachment. Fastener frequency and spacing for steel, wood, concrete and poured gypsum decks vary depending on attachment method and ratings. Contact the Lexcor Technical Department for details.

Adhesive Attachment

For installing Lexcor Isolex or Lexcor Isolex Tapered products to a structural concrete deck, bitumen or adhesive (Lexcor Insultac II; Lexcor Lexphalt)* attachment is the preferred method. If using an approved adhesive, install according to the manufacturer's guidelines. When using asphalt on concrete decks, priming is necessary. Precautions must be taken to prevent bitumen drippage. When using hot-applied bitumen for attachment, care must be taken to apply the bitumen in sufficient quantity to totally cover the available deck surface. Use 9 to 14 kg (18 to 30 pounds) of bitumen per square. To ensure positive attachment, the board must also be "stepped in" at several points while the bitumen is still hot. The recommended insulation panel size for hot asphalt attachment is 122 cm x 122 cm (4 x 4 ft). Due to the unevenness of solid decks, 122 cm x 244 cm (4 x 8 ft.) boards are not recommended for bitumen attachment.

*: Adhesives must be recommended by the manufacturer for this type of application and approved by Lexcor.

Material Storage - Factory-applied packaging is only intended for protection during transit. When stored outdoors, or on the job site, packages should be stacked on pallets at least 10 cm (4") above ground level and completely covered with a weatherproof covering such as a tarpaulin. The temporary factory-applied packaging should be slit or removed to prevent accumulation of condensation. Roof insulation which has become wet and/or damaged should be removed and replaced with solid, dry insulation.

Caution (Important Product Information) - This product is a polyisocyanurate organic plastic foam and will burn if exposed to an ignition source of sufficient heat and intensity, or open flame, such as a welder's torch. Like other organic materials, this product will release smoke if ignited. Do not apply flame directly to Lexcor Iso insulation products. This product should be used only in strict accordance with Lexcor recommended uses and application instructions.

WARRANTY

Project specific warranties are available. Contact Lexcor's Technical Department for more information.

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