

## BOREAL NATURE ELITE



Boreal Nature Elite is a closed-cell medium density spray polyurethane foam insulation formulated with environmentally responsible HFO blowing agents. The product is manufactured without ozone depletion substances (Zero ODS) and contains negligible amount of Global Warming Potential (GWP) substances.

Boreal Nature Elite has been tested by an independent laboratory and evaluated by CCMC. **The finished product surpasses the CAN/ULC S705.1-15 material standard requirements.**

PHYSICAL PROPERTIES – CCMC # 14140-L			
PHYSICAL PROPERTIES	STANDARD	RESULT	
Core Density	ASTM D1622	32.0 kg/m <sup>3</sup>	2.0 lb/ft <sup>3</sup>
Compressive Strength	ASTM D1621	228 kPa	33.1 psi
Tensile Strength	ASTM D1623	205 kPa	29.7 psi
Water Vapour Permeance (50mm thickness)	ASTM E96 (Procedure A)	34 ng (Pa.s.m <sup>2</sup> )	
Surface Burning (flame spread index)	CAN/ULC S127-14	285	
Fungi Resistance	ASTM C1338	No growth	
Long Term Thermal Resistance Thickness 25 mm Thickness 50 mm Thickness 75 mm Thickness 100 mm	CAN/ULC- S770-09	0.93 RSI 1.96 RSI 2.93 RSI 4.12 RSI	
Air Permeance	ASTM E2178	0.001 L/(s.m <sup>2</sup> )	
Recommended Time to Occupancy	CAN/ULC S774	25 hours	
Open Cell Content	ASTM D6226 (Procedure 2)	2.8 %	
Water Absorption (volume)	ASTM D2842 (Procedure A)	1.6 %	
Dimensional Stability	ASTM D2126 (28 days) -20°C 80°C 70°C, 97% (RH±3%)	-1 % +2 % +13 %	

PHYSICAL PROPERTIES – Additional testing		
Radon mitigation system	CCMC Masterformat 07 26 23.0	CCMC #14445-R
Air Barrier System	CCMC Masterformat 07 27 09.01	CCMC Report in process
Long Term Thermal Resistance (50mm)	CAN/ULC- S770-03	2.14 RSI (R 6.2/in)
Surface Burning (flame spread index)	CAN/ULC S102-10	30
15 minutes wall assembly high heat	NBC, Art. 3.2.3.8 Protection Exterior Building Face, Sentence 2 CAN/ULC S101 15-min. Stay In Place test.	Met the requirements on three different wall designs. Independent laboratory report upon request.
Initial Thermal Resistance *	ASTM C-518 (CAN/ULC S770) 10 days 23°C and 50% R.H.	2.49 RSI (R 7.2/in)

\*Independent testing verified that BOREAL NATURE ELITE R-value varies by less than 3% from the initial thermal resistivity value when samples were conditioned for 180 days. (23°C and 50% R.H)

RECYCLED AND RENEWABLE CONTENT	
Recycled Content	17.4 %
Renewable Materials Content (Veg. oils)	5.8 %

LONG TERM THERMAL RESISTANCE (CAN/ULC S770-09)		
THICKNESS mm (in)	R-VALUE (ft <sup>2</sup> .hr.°F)/Btu	RSI (m <sup>2</sup> .K)/W
50.8 (2.00)	11.4	2.0
63.5 (2.50)	14.3	2.5
76.2 (3.00)	17.4	3.1
88.9 (3.50)	20.6	3.6
102.0 (4.00)	24.1	4.2
127.0 (5.00)	30.7	5.8
152.0 (6.00)	36.5	6.4
177.8 (7.00)	42.7	7.5
203.2 (8.00)	48.9	8.6

COMPONENT PRODUCT SPECIFICATIONS		
PROPERTIES	POLYMERIC ISOCYANATE A-2732	BOREAL NATURE Elite RESIN
Colour	Brown Liquid	Green Liquid
Viscosity at 25°C	150 – 250 cps	280 - 420 cps
Specific Gravity at 25°C	1.22 – 1.25	1.17 – 1.23
Shelf Life	12 months	6 months
Storage Temperature	15-35°C / 59-95°F	15-25°C / 59-77°F
Ratio (volume)	100	100

INSTALLATION GUIDELINES			
Boreal Nature Elite	Ambient Temperatures	Spray Temperatures	Minimum Spray Pressure
Summer	+10°C to +35°C (50 to 95°F)	35°C to 49°C (95 -120°F)	5516 kPa (800 psi)
Regular	0°C to +20°C (32 to 68°F)	35°C to 49°C (95 -120°F)	
Winter	-10°C to +10°C (14 to 50°F)	38°C to 55°C (100-130°F)	

**ADDITIONAL INFORMATION**

- Maximum thickness per pass must not exceed 50 mm (2 inches). Thicknesses greater than 50 mm per pass generate excessive exothermic heat which, in extreme cases, may ignite the foam.
- It is possible to apply two successive passes of 50 mm. Wait 2 hours before applying a third pass of 50mm. Alternatively, wait until the internal temperature in the center of the foam is less than 37°C (100°F) to apply an additional pass of 50mm.
- Maximum installed thickness during 24 hour period is not to exceed 200mm (8 inches).
- Boreal Nature Elite is combustible and must be installed in accordance with applicable building codes.
- The service temperature is between -60°C and 80°C.
- Before handling these chemicals, please consult the Safety Data Sheet for the two components (available online).
- Temperature, humidity, equipment, substrate can vary installation parameters.
- In the application vehicle, the recommended storage temperature of the products (A and B) should be between 18°C and 24°C for optimum performance.

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BOREAL Nature Elite must be applied by licensed installers in accordance with the CAN/ULC S705.2 application standard.