



## TECHNICAL DATA SHEET

BOREAL ELITE is a medium density spray-applied rigid polyurethane foam insulation specially formulated without any ozone depletion substances (Zero ODS). BOREAL ELITE has a global warming potential (GWP) of 1, which is 99.9% lower than current HFCs used in this industry. This system is formulated with plant-based materials, recycled products and lavender extracts. The lavender extracts generate a pleasant and fresh odour during the application. BOREAL ELITE is lime green in colour.



BOREAL ELITE has been tested by an independent laboratory and accredited by CCMC (14140-L). The finished product surpasses the CAN/ULC S705.1-15 material standard requirements. BOREAL ELITE must be applied by licensed installers in accordance with the CAN/ULC S705.2 application standard.

### TYPICAL PHYSICAL PROPERTIES

PHYSICAL PROPERTIES	STANDARD	RESULT
Core Density	ASTM D1622	32.0 kg/m <sup>3</sup> (2.00 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	ASTM E96 (core, 50mm)	34 ng/(Pa*s*m <sup>2</sup> )
Surface burning (flame spread index)	CAN/ULC S102 (S127)	30
Smoke Develop Index	CAN/ULC S102-10	285
Long Term Thermal Resistance (50mm)	CAN/ULC S770-09	1.96 (k*m <sup>2</sup> )/W
Air Permeance @ 75 Pa	ASTM E2178	0.0008 L/(s*m <sup>2</sup> )
Volatile Organic Emissions – Recommended time to occupancy	CAN/ULC S774	24 hours
Open Cell Content	ASTM D6226	2.8%
Water Absorption	ASTM D2842 (by volume)	0.6%
Dimensional Stability ASTM D2126 (28 days)	-20°C, Ambient R.H.) 80°C, ambient R.H.) 70°C, 97%RH (+-3% R.H.)	-1% +2% +13%

### ADDITIONAL TEST RESULTS

PHYSICAL PROPERTY	STANDARD	RESULT
Long Term Thermal Resistance (50mm)	CAN/ULC S770-03	RSI 2.14 (R-6.2/inch)
Recycled Content	GreenGuard Gold	17.4%
Renewable Materials Content	GreenGuard Gold	5.8%

### LONG-TERM THERMAL RESISTANCE (CAN/ULC S770-09)

Thickness mm (inches)	R-VALUE (ft <sup>2</sup> *hr*°F)/BTU	RSI (m <sup>2</sup> *K)/W
50.8 (2.00)	11.4	2.00
63.5 (2.50)	14.3	2.51
76.2 (3.00)	17.1	3.01
88.9 (3.50)	20.6	3.63
102.0 (4.00)	24.1	4.24
127.0 (5.00)	30.2	5.31
152.0 (6.00)	36.5	6.42
177.8 (7.00)	42.7	7.52
203.2 (8.00)	48.9	8.62

## INSTALLATION GUIDELINES

BOREAL NATURE	Ambient Temperatures	Spray Temperatures	Spray Pressure
SUMMER	10 to 35°C (50 to 95°F)	35 to 46°C (95 to 115°F)	5516 kPa (800 psi)
WINTER	-10 to 15°C (14 to 59°F)	38 to 50°C (100 to 125°F)	5516 kPa (800 psi)

Processing conditions can vary depending on temperature, humidity, substrate, equipment, and other factors.

It is the applicator's responsibility to process and apply BOREAL ELITE within specification.

## COMPONENT PRODUCT SPECIFICATIONS

PROPERTY	POLYMERIC ISOCYANATE A-2732	BOREAL NATURE RESIN
COLOUR	Brown liquid	Dark liquid
Viscosity at 25°C	150-250 cps	200-400 cps
Specific gravity	1.22 – 1.24	1.17 – 1.21
Shelf life	12 months	6 months

## REACTIVITY PROFILE

CREAM TIME	GEL TIME	RISE TIME
0 to 1 second	2 to 3 seconds	4 to 5 seconds

## ADDITIONAL INFORMATION

- ✓ CAN/ULC S705.2 requires a maximum per pass thickness of 51mm (2 inches). Spraying thicker can result in changes to physical properties.
- ✓ Internal temperature of installed pass must be 29°C before installing subsequent passes. Maximum thickness during 24 hour period is 203mm (8 inches).
- ✓ Like all spray foam products, "Boreal Elite" is combustible. An approved thermal barrier must be installed in accordance with applicable building codes.
- ✓ The service temperature of "Boreal Elite" is between -60°C and 80°C.
- ✓ Recommended storage temperature of materials is from 10 to 25°C (50 to 77°F).

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