

## TECHNICAL DATA SHEET



Polyurethane spray foam  
EXPANDED WITH LAVENDER WATER

# GENYK

**Proudly Distributed By:**  
**Pinnacle West Enterprises Inc.**  
 31897 Mercantile Way  
 Abbotsford, BC, V2T 4C3  
 Ph. 1-800-901-0088  
 info@pinnaclewest.net

## DESCRIPTION

BOREAL NATURE is a TYPE 2 spray applied insulation polyurethane foam system, medium density specially formulated without any ozone depletion substances (Zero ODS). This system is formulated based on renewable substances, recycled products and is blown with lavender water. This lavender water generates a pleasant and fresh odour during the application. BOREAL NATURE colour is green lime.

BOREAL NATURE has been tested by an independent laboratory and accredited by the CCMC. It surpasses the CAN/ULC S705.1 requirements including amendments 1, 2 and 3 (Standard for Thermal Insulation-Spray Applied Rigid Polyurethane Foam, Medium Density, Material Specification standard).

BOREAL NATURE must be applied by CUFCA licensed installers under the application standard CAN/ULC S705.2-05. CCMC # : 14025-L

## TYPICAL PHYSICAL PROPERTIES

(as obtained by EXOVA, report # 16-06-P0086, Revision 1, under CCMC re-evaluation)

| PHYSICAL PROPERTIES   | STANDARD                                     | RESULT  |
|---|--|---|
| Density (core)  | ASTM D1622                                   | 33.6 kg/m <sup>3</sup> (2.09 lb/ft <sup>3</sup> ) |
| Initial Thermal Resistance<br>(25.4 mm)                           | ASTM C518                                    | 1.30 RSI  |
|   |  | <b>R=7.4 / inch</b>                               |
| Long Term Thermal<br>Resistance (LTTR @ 50 mm)                    | CAN/ULC S770                                 | 2.03 RSI  |
|   |  | <b>TYPE 2 (The Highest)</b>                       |
| Dimensional Stability   | ASTM D2126 (28 days, -20°C,<br>Ambient R.H.) | -0.60 %   |
|   | ASTM D2126 (28 days, +80°C,<br>Ambient R.H.) | 3.70 %  |
|   | ASTM D2126 (28 days +70°C,<br>97% +-3% R.H.) | 4.10 %  |
| Compressive Strength  | ASTM D1621                                   | 201 kPa (29.2 psi)                                |
| Tensile Strength  | ASTM D1623                                   | 217 kpa (31.5 psi)                                |
| Open Cell Content   | ASTM D2856                                   | 1.23 %  |
| Water Absorption (volume)   | ASTM D2842                                   | 1.74 %  |
| Water Vapor Permeance   | ASTM E96                                     | 45 ng(Pa.s.m <sup>2</sup> )                       |
| Surface Burning (Flame<br>Spread Index)                           | CAN/ULC S102 (S127)                          | 375   |
| Smoke Develop Index   | CAN/ULC S102                                 | 300   |
| Air Permeance @ 75 Pa   | CCMC 07273                                   | 0.0006 L/s.m <sup>2</sup>                         |
| Volatile Organic Emissions –<br>Recommended Time to<br>occupancy. | CAN/ULC S774                                 | 1 DAY   |

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

| Thickness<br>Mm (inches) | R-VALUE<br>(ft <sup>2</sup> *hr*°F/BTU) | RSI<br>(m <sup>2</sup> *K/W) |
|--------------------------|---|------------------------------|
| 50.8 (2.00)              | 11.8                                    | 2.06                         |
| 63.5 (2.50)              | 14.9                                    | 2.62                         |
| 76.2 (3.00)              | 18.1                                    | 3.19                         |
| 88.9 (3.50)              | 21.5                                    | 3.79                         |
| 102.0 (4.00)             | 24.6                                    | 4.33                         |
| 127.0 (5.00)             | 31.1                                    | 5.48                         |
| 152.0 (6.00)             | 37.1                                    | 6.53                         |
| 177.8 (7.00)             | 43.4                                    | 7.64                         |
| 203.2 (8.00)             | 49.9                                    | 8.79                         |

## COMPONENT PRODUCT SPECIFICATIONS

| PROPERTY          | POLYMERIC ISOCYANATE<br>A-2732 | BOREAL NATURE<br>RESIN |
|-------------------|--------------------------------|------------------------|
| Appearance        | Brown liquid                   | Black liquid           |
| Viscosity at 25°C | 150-250 cps                    | 200-300 cps            |
| Specific gravity  | 1.22 – 1.25                    | 1.17 – 1.21            |
| Shelf life        | 12 months                      | 6 months               |

## TEMPERATURE AND PARAMETERS

|                               | Installation<br>Temperature<br>(Ambient & substrate) | Component<br>Temperature<br>(A & B)                | Minimum Spraying<br>Pressure |
|-------------------------------|--|--|------------------------------|
| BOREAL NATURE<br>Summer       | 10 <sup>0</sup> C to 35 <sup>0</sup> C               | 35 – 41 <sup>0</sup> C<br>(95-105 <sup>0</sup> F)  | 5516 kPa (800 psi)           |
| BOREAL NATURE<br>Intermediate | 0 <sup>0</sup> C to 15 <sup>0</sup> C                | 35 - 45 <sup>0</sup> C<br>(95-113 <sup>0</sup> F)  | 5516 kPa (800 psi)           |
| BOREAL NATURE<br>Winter       | -10 <sup>0</sup> C to 5 <sup>0</sup> C               | 38 – 50 <sup>0</sup> C<br>(100-122 <sup>0</sup> F) | 5516 kPa (800 psi)           |

## REACTIVITY PROFILE

|                   |                 |                  |
|-------------------|-----------------|------------------|
| <b>Cream Time</b> | <b>Gel Time</b> | <b>Rise Time</b> |
| 0-1 second        | 2-3 seconds     | 4-5 seconds      |

## ADDITIONAL INFORMATION

The service temperature of this foam is between -60°C and +80°C (-76°F and +176°F). When spraying this foam system, the sprayer should not exceed 51 mm (2 inches) per pass. Spraying thicker could result in a sudden combustion of the foam which can happen hours after the installation of the foam. As with any plastic insulation, this foam is combustible and must be protected by an approved thermal barrier (Building code of Canada or local standards).

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