BOREAL nature
Expanded with LAVENDER water

GENYK

1701, 3rd Avenue
Shawinigan (Quebec), CANADA
Tel : 819 729-0395
Info@genyk.com

TECHNICAL DATA SHEET

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 is lime green in colour.

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.
CCMC#14025-L

TYPICAL PHYSICAL PROPERTIES

PHYSICAL PROPERTIES	STANDARD	RESULT
Core Density	ASTM D1622	33,6 kg/m^3 (2,09 lb/ft^3)
Compressive Strength	ASTM D1621	201 kPa (29,2 psi)
Tensile Strength	ASTM D1623	217 kpa (31,5 psi)
Water Vapor Permeance	ASTM E96	45 ng(Pa.s.m^2)
Surface Burning (Flame Spread Index)	CAN/ULC S102 (S127)	375
Smoke Develop Index	CAN/ULC S102	300
Initial Thermal Resistance (50 mm)	ASTM C518	2.55 k*m^2/W (R 7,4 / inch)
Long Term Thermal Resistance.	CAN/ULC S770	2.03 k*m^2/W Type 2 (The highest) (R 6/inch)
Air Permeance @ 75 Pa	CCMC 07273	0,0006 L/s.m^2
Volatile Organic Emissions – Recommended Time to occupancy.	CAN/ULC S774	1 DAY
Open Cell Content	ASTM D2856	1,23 %
Water Absorption (volume)	ASTM D2842	1,74%
Dimensional Stability	ASTM D2126 (28 days) -20ºC, Ambient R.H.) 80ºC, ambient R.H. 70ºC, 97% (+-3% R.H.)	 -0,60% 3,70% 4,10%

LONG-TERM THERMAL RESISTANCE

Thickness Mm (inches)	R-VALUE (ft^2*hr*°F/BTU)	RSI (m^2*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

ADDITIONAL INFORMATION

- ✓ Maximum per pass thickness is 51mm (2 inches). Spraying thicker can result in spontaneous combustion and poor overall spray foam quality.
- ✓ Internal temperature of installed pass must be 25°C before installing subsequent passes. Maximum thickness during 24 hour period is 203 mm (8 inches).
- ✓ Like all spray foam products, Genyk "Boreal" is combustible. An approved thermal barrier must be installed in accordance with applicable building codes.
- ✓ The service temperature of Genyk "Boreal" is between -60°C and 80°C.
- ✓ Recommended storage temperature of materials is from 10 to 25°C (50 to 77°F).

INSTALLATION GUIDELINES

BOREAL NATURE	Ambient Temperatures	Spraying Temperatures	Minimum Spraying Pressure
SUMMER	10°C to 35°C (50 to 95°F)	35 – 41°C (95-105°F)	5516 kPa (800 psi)
INTERMEDIATE	0°C to 15°C (32 to 59°F)	35 - 45°C (95-113°F)	5516 kPa (800 psi)
WINTER	-10°C to 5°C (14 to 41°F)	38 – 50°C (100-122°F)	5516 kPa (800 psi)

COMPONENT PRODUCT SPECIFICATIONS

PROPERTY	POLYMERIC ISOCYANATE A-2732	BOREAL NATURE RESIN
COLOUR	Brown liquid	Dark liquid
Viscosity at 25ºC	150-250 cps	200-400 cps
Specific gravity	1.22 – 1.25	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

The information contained herein is based on information available to Genyk Inc. The date is considered an accurate description of the product performance and is presented in good faith. However, Genyk Inc. disclaims any liability for incidental or consequential damages which may result from the inappropriate use of this product. It is the user's responsibility to thoroughly test the product in any application to determine performance, efficiency and safety. No information contained herein is to be considered as permission or recommendation to infringe on any patent or other intellectual property.

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WATER VAPOUR PERMEANCE OF GENYK 'Boreal Nature' (CCMC # 14025-L)

The generally accepted definition of permeance is the degree to which a material admits a flow of matter (or energy). Thus, water vapour permeance is the amount of moisture that can pass through a material.

The international system of units (SI) is measured in nanograms per second per square meter per pascal.
SI measure = ng/(Pa*s*m^2)

Section 9.25.4.2 (1) of the National Building Code states:

> *Vapour barriers* shall have a permeance not greater than 60ng/(Pa*s*m^2), measured in accordance with ASTM E96, "Water Vapor Transmission of Materials", using the desiccant method (dry cup).

As part of the CCMC evaluation process, the GENYK 'Boreal Nature' material was tested to the ASTM E96 protocol. The ASTM E96 test results demonstrate that— **GENYK 'Boreal Nature' has a vapour water permeance of 45ng/(Pa*s*m^2).**

GENYK 'Boreal Nature' conforms to the requirements of the National Building Code, Section 9.25.4.2 (1). No additional vapour barrier is needed to control condensation.

Inquiries regarding the application of GENYK 'Boreal Nature' should be directed to:

Mike Richmond
Technical Sales Representative
GENYK
Cell : 226-339-3089
Toll free : 1-844-404-3695
mikerichmond@genyk.com