ENVERGE®

NEXSEAL®

ULTRA-LOW GWP 2 LB. CLOSED CELL FOAM

CCMC # 14087-L
Canadian Construction Materials Centre

Ultra-low GWP of 1 | **HFO Blowing Agent** | **Contains no HFCs** | **Zero Ozone Depleting**

Discover how **Nexseal** can enable sustainable, energy efficient, and flexible building design. Our universally certified products provide environmentally responsible options aimed at creating better buildings for a better future. **Nexseal** 2 lb. Closed Cell Spray Foam combines cutting edge performance with Ultra-Low Global Warming Potential (GWP) Liquid Blowing Agent, making **Nexseal** our most innovative, environmentally friendly product.

SUSTAINABLE
Not only will a reduction in energy consumption be produced, a reduction in carbon emissions will also be seen

IMPROVED AIR QUALITY
Free of all CFCs, HCFCs, HFCs, and formaldehyde, once cured and in place product contains no health risks

CODE APPROVED
Exceeds the current requirements in the national building code of Canada (NBC) as per CAN/ULC S705.1

CERTIFIED APPLICATORS
Installed in accordance with CAN/ULC S705.2 by licensed contractors who use trained and certified installers

DISTRIBUTED BY
PINNACLE WEST INC

1-800-901-0088
www.pinnaclewest.net

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DESCRIPTION

Nexseal 2.0 CDN is a spray-applied, two component, closed cell polyurethane foam insulation system compliant with CAN/ULC S705.1-15. The product is formed by the reaction of proprietary resin blend and polymeric methylene diphenyl diisocyanate. The resin blend is comprised of Polyols, additives, fire retardants and low global warming potential blowing agents based on hydrofluoroolefin (HFO) technology. The spray applied nature allows the material to flow into voids and seal cracks, expanding to form a monolithic structure with high R-value (resistance to heat flow). Nexseal 2.0 CDN can form various control layers for buildings and structures: insulation, air barrier, moisture retarder and weather barrier. Manufactured under a quality control program administered under ISO 17025. The colour of the installed final cured product is Army Green. Nexseal is an ASTM E-84 (NFPA 255, UL723) class 1 (Class A) spray foam insulation.

CHEMICAL PROPERTIES

(For components)	ISOCYANATE	RESIN
Viscosity, cps 25°C (77°F)	200	700
Density (lbs/gal)	10.3	10.3
Mixing Ratio By volume	1	1
Stability When Stored at 10°C to 20°C (50°F to 70°F)	6 Months	6 Months

PHYSICAL PROPERTIES

(Cured Material)	TEST	RESULT
Apparent Core Density	ASTM D1622	35 Kg/m^3 (2.17 lbs/ft^3)
R-value (aged)	ASTM C518	7.2 R/in
Compressive Strength (Parallel to Rise):	ASTM D1621	223 kPa (32.34 psi)
Tensile Strength	ASTM D1623	221 kPa (32.05 psi)
Water Vapor Permeance	ASTM E96	38 Ng/Pa·s·m^2
Dimensional Stability (after 28 days)	ASTM D2126	
Volume % Change at: -20°C		0.3%
Volume % Change at: 80°C		0.6%
Volume % Change at: 70°C, 97% R.H.		9.2%
Surface Burning Characteristics (FSR)	CAN/ULC S102	246
Flame Spread Index	ASTM E-84	< 25
Smoke Developed Index	ASTM E-84	< 450
Air Permeance L/s @ 75Pa	ASTM E2178	0.0031 L/s·M^2
Time of Occupancy (VOC)	CAN/ULC S774	24 hours
Fungi Resistance	ASTM C1338	Pass no growth
Service Temperature	-60°C to 80°C (-76°F to 176°F)	
Global Warming Potential	1 (same as CO_2)	

LONG TERM THERMAL RESISTANCE (CAN/ULC-S770)

(Cured Material)	RSI (m^2·°C/W)	R-Value (h·ft^2·°F/Btu)
50.0 mm (1.97“)	1.87	11
50.8 mm (2.0“)	1.90	11
75.0 mm (2.95“)	2.92	17
76.3 mm (3.0”)	2.97	17
88.9 mm (3.5“)	3.46	20
100.0 mm (3.94“)	4.02	23
101.6 mm (4.0“)	4.08	23
127.0 mm (5.0”)	5.11	29
152.4 mm (6.0”)	6.13	35
177.8 mm (7.0”)	7.15	41
203.2 mm (8.0”)	8.17	46

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RECOMMENDED USES

Nexseal 2.0 CDN will provide excellent performance in a wide range of residential, commercial and industrial applications including:

Walls	Ceilings	Floors	Attics	Crawlspaces
Foundations	Concrete Slabs	Residential Ducts	Plenums	Cold Storage
Freezers	Piping	Storage Tanks	Truck Bodies	Industrial Applications

APPLICATION

Nexseal 2.0 CDN must be applied by UFC licensed installers under the application standard CAN/ULC S705.2. Nexseal 2.0 CDN should be applied at a minimum thickness of 12mm (1/2") and a maximum thickness of 50 mm (2"). Up to four 50 mm (2") lifts can be applied at a time without having to wait for the foam to completely cool. It is the responsibility of the certified contractor to determine when the first layer has cooled sufficiently for additional passes. For substrates with sensitivity to heat like plastic or metal, tests should be done to understand the effect of the SPF exotherm on the material. In some cases putting on a flash coat first is recommended to prevent any adverse effects on the substrates. Nexseal 2.0 CDN is combustible. A thermal barrier must be installed as per local building code requirements.

MATERIAL	SUBSTRATE TEMPERATURE
Nexseal 2.0 CDN Summer	10°C to 43°C (50°F to 110°F)
Nexseal 2.0 CDN Winter	-10°C to 27°C (14°F to 80°F)

PROCESS SPECIFICATIONS

Equipment pre-heater temperature		
Component A	49°C to 60°C	120°F to 140°F
Component B	49°C to 60°C	120°F to 140°F
Hose temperature	49°C to 60°C	120°F to 140°F
Spray pressure (dynamic)	1,000 to 1,500 psi	69 to 103 Bar

STORAGE RECOMMENDATIONS

Nexseal 2.0 CDN components have an optimal shelf life of 6 months when stored in sealed containers at 10°C to 20°C (50°F to 70°F). Store in a dry area on wooden pallets to avoid direct contact with the ground. Excessively high temperatures may reduce optimal shelf life. Store material at 20°C to 32°C (70 – 90°F) for 48 hours prior to application of the product.

SAFETY PRECAUTIONS

Direct contact with Nexseal 2.0 CDN liquid or airborne components during application leads to eye and skin irritation. Repeated inhalation of airborne components will cause respiratory allergy. Always wear protective equipment when handling product. It is critical to read and become familiar with the Safety Data Sheets prior to working with Nexseal 2.0 CDN spray foam liquid components. During application respiratory protection is required for the applicator and bystanders or helpers. For more information consult Safety Data Sheets.

TECHNICAL SUPPORT

We have a dedicated technical support team offering knowledgeable support for everything from preventative maintenance, equipment calibration and servicing through to coating and foam application advice. If you have any questions regarding the use of this product please call us toll free at 1-800-901-0088 or email us info@pinnaclewest.net.