

DESCRIPTION

Kawartha 2000 is Closed-Cell Medium Density Spray Polyurethane Foam insulating material that has been tested by an independent laboratory and evaluated by the **Canadian Construction Materials Centre (CCMC) CCMC 14163-L**. It complies with the CAN/ULC-S705.1-15 "Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density – Material Specification."

Kawartha 2000 must be applied by CALIBER licensed installers under the application standard CAN/ULC S705.2. It is a low VOC emitting and low GWP (Global Warming Potential) <1 (Kg CO2 eq) material and it meets the requirements of the **GREENGUARD** and **GREENGUARD GOLD** certification. It can be used for residential, schools, healthcare facilities, industrial, and institutional building application where proper insulation is in need. **Kawartha 2000** also creates a bond to almost every kind of construction material on market. It can be applied to walls, roof, rim joists, crawl space foundations and most difficult space. It comes in two different formulations, which is Winter and Summer formulation. The colour of the cured foam is **Alpine Green**.

TYPICAL PHYSICAL PROPERTIES

Physical Properties	Result	Standard
Apparent Core Density	35kg/m ³	ASTM E1622-14
Compressive Strength	183kPa	ASTM D1621-16
Tensile Strength	216kPa	ASTM D1623-17
Open Cell Content	5%	ASTM D6226-15
Water Absorption	0.7%	ASTM D2842
Water Vapour Permeance	47 Pa.s.m ²	ASTM E96/E96M-16
Dimensional Stability (after 28 days) Volume % Change at:		
-20°C	-1	ASTM D2126-15
80°C	2	
70°C, 97 ± 3% RH	6	
Flame Spread Rating (FSR)	220	CAN/ULC S102 & CAN/ULC S127
Smoke Developed Classification	110	CAN/ULC S102 & CAN/ULC S127
Air Permeance, L/s @ 75 Pa (Mandatory material only testing)	0.004 (s•m ²)	ASTM E2178-13
Time of Occupancy (VOC)	25 hours	CAN/ULC S774:2020
Fungi Resistance	No Fungal Growth	ASTM C1338
Service Temperature		-20°C to 80°C

LONG-TERM THERMAL RESISTANCE

Test Method: CAN/ULC S770-09

Thickness mm/inches	R Value (ft ² *hr*°F/BTU)	RSI (m ² *K/W)
50/1.97	10.62	1.87
75/2.95	17.00	2.99
88.9/3.5	20.43	3.60
102/4	24.02	4.23
127/5	31.02	5.46
152/6	38.02	6.70
177.8/7	45.11	7.94
203/8	52.40	9.23
228.6/9	60.02	10.57

REACTIVE PROFILE

CREAM TIME	GEL TIME	RISE TIME
0-1 seconds	2-3 seconds	4-5 seconds

ADDITIONAL INFORMATION

Physical Properties	Description
Ultraviolet (UV) Exposure	3 months

LIQUID COMPONENT PROPERTIES

Shelf Life	6 months
Storage Temperature Recommendation	10°C - 25°C (50°F - 77°F)
Drum Mass	248KG/246.5KG
Colour	Alpine Green
Viscosity at 25°C (77°F)	200-400 cps
Specific Gravity at 25°C (77 °F)	1.05-1.15
Ratio (parts by Volume)	100 (1 part)

INSTALLATION GUIDELINES

Substrate & Ambient Temperature	0°C to 35°C (32°F to 95°F)
Proportioner Temperature (Side A and B)	35°C to 50°C (95°F to 122°F)
Hose Temperature	35°C to 45°C (95°F to 113°F)
Pressure	900psi to 1500psi (62Kpa to 103Kpa)
Humidity Level	< 80% (Care should be taken if it is > 80%).

APPLICATION

In accordance with National Building Code of Canada CAN/ULC S705.2, it is required to apply in single passes of minimum of 15mm (0.6 inches) to maximum passes of 50mm (2 inches) and required cooling time between passes must be followed. For the application falls outside the scope of the National Building Code of Canada CAN/ULC S705.2, it can be applied in single passes of minimum of 15mm (0.6 inches) to 102mm (4 inches). Failing to adhere to the minimum required cooling time increases the likelihood of experiencing post-growth scorching and/or fire hazards.

Number of passes	Single pass thickness	Total thickness	Wait time between passes (Summer/Winter Foam)
2	2"	4"	**0 Minutes
3	2"	4" to 6"	15 Minutes
4	2"	6" to 8"	30 Minutes

****If the temperature of the initial 2 inches exceeds 107°F (41.7°C), it is suggested to take a 5-minute break between the first two passes of winter foam**

Kawartha 2000 should not be left exposed and in close contact from heat emitting devices. A thermal barrier must be installed as per local building code requirements.

Storage Recommendations

- The Blend Polyol should be stored in sealed containers, to avoid absorption of water vapour
- During transportation, protect the product from excessive shaking, and avoid sunlight exposure
- Product should be stored in a ventilated space, away from light, water, and fire

Safety Precautions

- Direct contact with Kawartha leads to eye and skin irritation
- Repeated inhalation of volatile gas will cause respiratory allergy- seek immediate medical treatment
- Always wear protective equipment when handling product-gloves, protective goggles, protective clothing
- If exposed to eyes: immediately rinse with water for at least 15 minutes
- If exposed to skin: wash with soapy water
- If swallowed: SEEK EMERGENCY MEDICAL TREATMENT IMMEDIATELY!

Disclaimer: The use of any products supplied by Shunda Polyurethane Ltd. ("Corporation") is subject to the following disclaimer. It is the responsibility of the contractor to ensure that all work performed with our products is done by licensed contractors using licensed installers. The contractor acknowledges that the failure to comply with this requirement may result in damages, legal costs, and other expenses. The contractor hereby agrees to indemnify and hold Corporation harmless from any and all claims, damages, expenses, and liabilities arising from the use of our products by unlicensed contractors or installers. The contractor is solely responsible for determining the suitability of our products for their intended use, and for ensuring that all installation, use, and maintenance instructions are followed. Corporation shall not be liable for any damages, including but not limited to direct, indirect, incidental, consequential, or special damages, arising from the use or inability to use our products.

TECHNICAL ASSISTANCE

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