



**Description**

Enerthane ECO spray polyurethane foam is manufactured with 4<sup>rd</sup> generation zero ODP (Ozone Depletion Potential) blowing agent and is designed for various applications. It is characterized by a superior insulation value and good physical and mechanical properties. The minimum in-situ density is 1.98 lbs/ft<sup>3</sup> (31.7 kg/m<sup>3</sup>).

**Advantages:**

- ULC Evaluation Report R40345-01
- Comply with CAN/ULC S705.1
- Installed in accordance with CAN/ULC S705.2 by accredited installers.

**PHYSICAL PROPERTIES**

<b>Air Permeance, L/s.m<sup>2</sup> @ 75 Pa</b>		0.002	
<b>Apparent Core Density<sup>(1)</sup></b>	<b>ASTM D1622</b>	2.1 lb / ft <sup>3</sup>	33.6 kg / m <sup>3</sup> *
<b>Compressive Strength</b>	<b>ASTM D1621</b>	27.3 lb /in <sup>2</sup>	188 KPa
<b>Dimensional Stability, % vol change</b>	<b>ASTM D2126</b>		
@ -20°C / -4°F		0.6	
@ 80°C / 176°F		4.3	
@ 70°C (158°F) 97%RH		7.8	
<b>Surface Burning Characteristics Flame Spread</b>	<b>CAN/ULC S102 &amp; CAN/ULC-S127</b>	385	
<b>Open Cell Content, % Volume</b>	<b>ASTM D6226</b>	5%	
<b>Long Term Thermal Resistance LTTR</b>	<b>CAN/ULC-S770</b>	1.0" R5.7	25mm RSI 0.98
		2.0" R11.6	50mm RSI 2.01
		3.0" R18.1	75mm RSI 3.13
		4.0" R25.0	100mm RSI 4.33
<b>Tensile Strength</b>	<b>ASTM D1623</b>	47.9 lb /in <sup>2</sup>	303 KPa
<b>Volatile Organic Emissions Time to Occupancy</b>	<b>CAN/ULC S-774</b>	Passed (24 hours)	
<b>Water Absorption, % by volume</b>	<b>ASTM D2842</b>	0.75%	
<b>Water Vapour Permeance (for 50mm)</b>	<b>ASTM E 96</b>	0.52 perm	30 ng / Pa-s-m <sup>2</sup>

<sup>(1)</sup> These values of 33.6 kg/m<sup>3</sup> represent the apparent core density of the laboratory-conditioned specimen. Non-conditioned on-site specimens have a core density of 31.7 kg/m<sup>3</sup> (1.98 lbs/ft<sup>3</sup>) measured by water displacement immediately after spraying; this value represents the minimum in-situ field-density specified by the manufacturer.

**CHEMICAL COMPONENTS & PROPERTIES**

<b>Physical Properties</b>	<b>Isocyanate (Component A)</b>	<b>Resin ( Component B)</b>
Density (23°C)	1.23	1.18
Viscosity (Cps, 25°C)	150-250	250-350
Ratio (by volume)	1: 1	
Drum Weight (kg)	250	240
Foam Colour	Turquoise	



**Reactivity and density**

- Gel time: 2-3 sec
- Reaction: 3-5 sec
- Laboratory Conditioned Density: 33.6 kg / m<sup>3</sup> (2.1 lb / ft<sup>3</sup>)
- In-Situ Sprayed Minimum Density: 31.7 kg/m<sup>3</sup> (1.98 lb/ft<sup>3</sup>)

**Storage and Shelf Life:** The B-component has a guaranteed shelf life of 6 months, as long as the original drum has not been opened and is still sealed. The storage temperature shall be between 15°C (60°F) and 25°C (77°F)

**SPRAY EQUIPMENT & PARAMETERS**

Enerthane ECO components shall be sprayed with equipment using a 1 / 1 ratio. The normal operating parameters are the following:

- Pressure: 900 – 1,200 psi
- Temperature: from 100°F (38°C) to 130°F (54°C)

**Thickness of Passes:** The thickness of the passes shall not exceed 50mm (2.0 inches). The foam shall be allowed to completely react before more foam is applied. In cold winter conditions, use thinner passes.

**Temperature Limitations (Climatic Conditions):** When there is more than 17°C (63°F) between the ambient temperature and the substrate temperature (for example when spraying in a heated interior during winter), or when the substrate temperature is lower than -10 °C (20°F), consult Enerlab. In these cases, the type of substrate is critical.

**LTTR VALUES**

Per CAN/ULC-S770 (R-Value: °F.ft<sup>2</sup>.hr / BTU; RSI: m<sup>2</sup>.°C / W)

Thickness		LTTR	
inch	mm	R-Value	RSI
1.0	25.4	5.7	1.00
1.5	38.1	8.7	1.53
2.0	50.8	11.6	2.04
2.5	63.5	15.1	2.65
3.0	76.2	18.1	3.18
3.5	88.9	21.9	3.85
4.0	101.6	25.0	4.40
5.0	127.0	31.2	5.50
6.0	152.4	37.5	6.60
7.0	177.8	43.7	7.70
8.0	203.2	50.0	8.80

