

# TECHNICAL DATA SHEET

Material Specification Criteria | Project Submittal Data



An Accella Brand

## FOAMSULATE™ ECO

MEDIUM DENSITY • 2lb • CLOSED CELL FOAM

TYPE 2 LTTR • CCMC 13527-L • AIR BARRIER SYSTEM CCMC 13583-R

Accella's Foamsulate™ ECO system is a true "Green" spray applied rigid polyurethane foam that contains rapidly renewable Soya, Corn, Sugar and Castor based polyols as well as recycled products derived from pre and post consumer products. Foamsulate™ ECO has a distinct colour of Georgian Pine green and is truly Green in nature, chemistry, colour and performance. Foamsulate™ ECO meets the CAN/ULC S705.1 requirements and has a listing number of CCMC 13527-L and CCMC 13583-R when used as part of an Air Barrier System.

Foamsulate™ ECO utilizes, zero ozone-depleting substances and is designed for use in commercial and residential construction applications that involve the National Building Code of Canada. Foamsulate™ ECO must be applied by licensed installers that follow the CAN/ULC S705.2 program. Accella utilizes Morrison Hershfield to administer our site quality assurance program.

Foamsulate™ ECO provides the highest rated TYPE 2 LTTR insulation value while also meeting requirements as a vapour barrier and air barrier. Other benefits include reductions in noise, dust, pollen, pest infiltrations and significantly improves on structural racking strength. Foamsulate™ ECO is available in two reactivities including: Winter and Summer.

For proper use of Foamsulate™ ECO spray foam, please refer to the Accella's Foamsulate™ Installer Manual and the CAN/ULC S705.2 Rigid Polyurethane Foam Medium Density Application standard.

Advantages are:

**HIGH R-VALUE • HIGH YIELD • CCMC #13583-R LISTED AIR BARRIER SYSTEM • VAPOUR BARRIER • LOW VISCOSITY RESIN  
EASE OF APPLICATION • HIGH CLOSED CELL CONTENT • ZERO ODP • SEAMLESS INSULATION**

## FOAMSULATE™ ECO TESTED PHYSICAL PROPERTIES:

PROPERTY	CAN/ULC S705.1 REQUIREMENTS	METRIC VALUE (IMPERIAL) FOAMSULATE™ ECO VALUES	TEST
CORE DENSITY	≥ 28 kg/ m <sup>3</sup>	37 kg/m <sup>3</sup> (2.3 lb ft <sup>3</sup> )	ASTM D 1622
COMPRESSIVE STRENGTH	≥ 170 kPa	282 kPa (41 psi)	ASTM D 1621
TENSILE STRENGTH	≥ 200 kPa	406 kPa (59 psi)	ASTM D 1623
DIMENSIONAL STABILITY	At -20C	≥ -1	ASTM 2126
	At 80C	≥ -1; ≤ +8	
	At 70C, 97% ± 3% RH	≤ +14	
OPEN CELL CONTENT	≤ 8% by volume	5%	ASTM D2856
WATER ABSORPTION	≤ 4% by volume	0.3%	ASTM D2842
WATER VAPOUR PERMEANCE	≤ 60 ng/(PAsm <sup>2</sup> )	58 ng/PAsm <sup>2</sup>	ASTM E96
AIR PERMEANCE	≤ 0.02 L/s @75 Pa (1.57 lbf <sup>2</sup> )	0.0005	
FLAME SPREAD	≤ 500	295	CAN/ ULC-S102/S127
FLAME SPREAD	NA	(20)	ASTM E84
SMOKE DEVELOPED	NA	(300)	ASTM E84
VOLATILE ORGANIC COMPOUNDS (VOC)*	Declare	24 hours	CAN/ULC-S774
INITIAL R VALUE	Declare	2.26 (R6.6)	ASTM C 518
LTTR ( LONG TERM THERMAL RESISTANCE) ( FOR 50 MM SAMPLE)	1.8M <sup>2</sup> K/W for Type 1 2.0M <sup>2</sup> K/W for Type 2	2.0 (R5.7)	CAN/ULC S770
UL GREENGUARD GOLD	GOLD:UL 2818 - 2013 Standard for Chemical Emissions for Building Materials, Finishes and Furnishings		

\*Independent lab results conducted at NRC conducting VOC testing for Foamsulate™ ECO indicated a time to occupancy of 1 hour. CCMC minimum allowable limit for VOC/occupancy is 24 hours with 0.3 air changes per hour.

**LONG TERM THERMAL RESISTANCE - TYPE 2:**

THICKNESS mm (inches)	R VALUE PER INCH °F • ft <sup>2</sup> • hr/BTU • in	R VALUE TOTAL AT THICKNESS °F • ft <sup>2</sup> • hr/BTU • in	RSI K • m <sup>2</sup> /W
50 mm (2 inches)	5.7	11.4	2.0
75 mm (3 inches)	5.8	17.4	3.0
100 mm (4 inches)	5.9	23.6	4.1

\*LTTR is a predicted value for closed cell foams to simulate a 5 year aged specimen at various thicknesses.

**CODE COMPLIANCE:** The National Building code of Canada requires the use of ½ inch gypsum board or other approved thermal barriers over any exposed cellular plastic insulation for occupied spaces.

**APPLICATION INFORMATION**

**STORAGE AND USE OF CHEMICALS:** Cold A & B components can cause poor mixing, pump cavitation, or other process problems due to higher viscosity. Condition and maintain the liquid components in each drum to 60-80°F prior to use, do not exceed 90° F. Do not store in direct sunlight or weather. Keep drums tightly closed when not in use. Shelf life of resin (B component) is twelve months from date of manufacture.

**SAFE HANDLING OF LIQUID COMPONENTS:** When removing bungs from containers use caution, contents may be under pressure. Loosen bung first and let any built up gas escape before completely removing. Avoid prolonged breathing of vapors. All individuals in contact with Foamsulate™ ECO and Foamsulate™ ISO liquids should have access and familiarize themselves to the SDS. Kit sizes are 454 kgs (227kg A and 227kg B).

**EQUIPMENT AND COMPONENT SETTINGS:** Polyurethane foam systems should be processed through 1:1 fixed ratio spray equipment. Foamsulate™ ECO B-side (white drum) is connected to the resin pump and the Foamsulate™ A-side (black or red drum) is connected to the isocyanate pump. The pre-heater should be set between 100-120°F (38°C-49°C) and the hose heat is able to maintain within 5° F of the primary temperature right to the spray gun. Proportioner pumps must be able to maintain at least 1000 psi output during spray (dynamic spray pressure). Foamsulate™ ECO has varying reactivities of system depending on the ambient conditions with Winter reactivity being labeled as “FF” and Summer reactivity being “SF”.

**APPLICATION GUIDELINES:** 15-50 mm (1/2 inch to 2 inch) is the required thickness per pass of Foamsulate™ ECO as per CAN/ULC S705.2. Allow adequate time between each pass. Multiple passes can be applied to reach the desired thickness and insulation value. Long term exposed applications should be protected from UV exposure with the use of a protective coating (project examples are tank or exposed ducting related applications). Always follow CAN/ULC S705.2 guidelines for application limitations and protocol for residential and commercial applications.

Ambient Temperature guidelines for application of Foamsulate™ ECO: (temperature will vary depending on substrate type, moisture and wind)

Winter (FF)	-10°C to + 10°C (-14°F to 50°F)
Summer (SF)	+10°C to + 40°C (50°F to 104°F)



**MANUFACTURED BY:**

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**EMERGENCY NOTIFICATIONS:**

CHEMTREC : Material Leaks, Spills  
 or Fire (800) 424-9300

**HEADQUARTERS:**

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