

### THERMAL INSULATION AND AIR BARRIER MATERIAL CCMC 14064-L

Specification Sections: 07 21 19 Foamed-in-Place Insulation

#### PRODUCT DESCRIPTION

Icynene ProSeal LE™ is a spray-in-place closed cell spray applied polyurethane foam insulation with low air permeance. Icynene ProSeal LE™ has Type 2 thermal resistance performance and meets the requirements of CAN/ULC-S705.1-01 (with Amendments No. 1, 2 and 3). In all buildings the product is for use as a thermal insulation and air barrier material in:

- exterior walls as continuous insulation on the exterior or interior
- wall cavities
- floors separating living spaces from a garage
- cathedral ceiling assemblies
- attic floors
- overhanging floor assemblies
- below or above grade foundation walls on the interior or exterior
- under floor slabs

#### PROPERTIES OF CURED FOAM

Characteristic	Test Method	Value
Core Density	ASTM D 1622	38.2 kg/m <sup>3</sup> (2.4 lb/ft <sup>3</sup> )
Initial Thermal Resistance at 50 mm	ASTM C 518	2.4 (m <sup>2</sup> ·K)/W (R14 at 2")
Colour		Platinum
Long Term Thermal Resistance at 50 mm	CAN/ULC- S770-03	2.02 (m <sup>2</sup> ·K)/W Type 2 (R12 at 2")
at 25 mm		1.0 (m <sup>2</sup> ·K)/W (R6 at 1")
at 75 mm		3.1 (m <sup>2</sup> ·K)/W (R18 at 3")
Conditioned Thermal Resistance at 50 mm	ASTM C 518	2.3 (m <sup>2</sup> ·K)/W (R13 at 2")
Air Permeance at 35 mm	ASTM E 2178	0.0005 L/s.m <sup>2</sup>
Water Vapour Permeance at 50 mm	ASTM E 96	34 ng/Pa.s.m <sup>2</sup> (0.6 Perm at 2")
Open Cell Content (by Volume)	ASTM D 6226	2%
Compressive Strength	ASTM D 1621	262 kPa (38 psi)
Tensile Strength	ASTM D 1623	283 kPa (41 psi)

Dimensional Stability at 28 days (Volume Change)	ASTM D 2126	-0.1% at -20°C
		-0.5% at 80°C
		+12.1% at 70°C and 97% RH
Water Absorption (by Volume)	ASTM D 2842	0.6%
Surface Flame Spread Rating	CAN/ULC-S127	340
Smoke Developed Classification	CAN/ULC-S102	325
Time to Occupancy <sup>(1)</sup>	CAN/ULC-S774	24 Hours
Fungus Testing	ASTM C 1338	No growth

(1) Volatile organic compound (VOC) emissions were evaluated in accordance with CAN/ULC-S705.1 requirements.

#### AIR BARRIER/ MECHANICAL VENTILATION

- Icynene ProSeal LE™ fills any shaped cavity, and adheres to most construction materials, creating assemblies with very low air permeance.
- Additional interior or exterior air infiltration protection is subject to applicable codes.
- All buildings insulated and air sealed with Icynene ProSeal LE™ must be designed to include adequate mechanical ventilation/outdoor air supply.
- For mechanical ventilation see CAN/CSA F-326 - Residential Mechanical Ventilation, HRAI (Heating, Refrigeration and Air Conditioning Institute of Canada) Digest, ASHRAE (American Society of Heating, Refrigeration and Air-Conditioning Engineers) guidelines, or any other acceptable good engineering practice.

#### BURN CHARACTERISTICS

- Icynene ProSeal LE™ is subject to all applicable National and/or Provincial building codes regarding fire prevention. Requirements for thermal barrier coverings must be met as per the applicable building code having jurisdiction.

#### PLASTIC PIPING

- Icynene ProSeal LE™ is compatible in direct contact with the following piping systems, as per Paschal Engineering Study:
  - CPVC
  - ABS
  - PVC
  - PP-R

**REVIEWED**

**By Pat Newton at 8:18 am, May 11, 2020**

## INSTALLATION

- Icynene ProSeal LE™ is installed by a network of Licensed Dealers, trained in its installation.
- Icynene ProSeal LE™ can be sprayed up to 127 mm (5") without waiting between passes. Maximum thickness per pass is 50 mm (2").
- For thickness greater than 127 mm (5"), the above procedure can be repeated after 30 minutes or until the surface temperature drops below 32°C (90°F).
- This product should not to be installed within 76 mm (3") of heat emitting devices or where the temperature is in excess of 82°C (maximum service temperature), as per ASTM C411 or in accordance with applicable codes.
- It can be installed in ambient temperature conditions between -5°C and 50°C (23°F and 122°F).
- Icynene ProSeal LE™ has excellent adhesion to a wide variety of substrates including common construction materials.
- Surface preparation is generally not necessary.
- Within seconds the foaming process is complete.

## AVAILABILITY

Contact Icynene Inc. at 800-758-7325 or visit our website at [www.icynene.com](http://www.icynene.com).

## WARRANTY

WHEN INSTALLED PROPERLY IN ACCORDANCE WITH INSTRUCTIONS, THE COMPANY WARRANTS THAT THE PROPERTIES OF THE PRODUCT MEET PRODUCT SPECIFICATIONS AS OUTLINED IN THIS TECHNICAL DATA SHEET. SAVE AND EXCEPT ANY EXCLUSIONS REFERENCED IN THE WARRANTY.

## TECHNICAL

Icynene Licensed Dealers and Icynene Inc. provide support on both technical and regulatory issues. Architectural specifications in CSC 3-Part format and design details are available at our website at [www.icynene.com](http://www.icynene.com).

## REGULATORY

Icynene ProSeal LE™ has been independently evaluated by the Canadian Construction Materials Centre (CCMC) as a thermal insulation in compliance with CAN/ULC-S705.1. For regulatory issues concerning Icynene ProSeal LE™ in Canada, please see CCMC Evaluation Report 14064-L, The NBC (National Building Code of Canada) or applicable Provincial Building Codes.

## RELATED REFERENCES

All physical properties were determined through testing by accredited third party agencies. Icynene Inc. reserves the right to change specifications in its effort of continuous improvement. Please confirm that technical data literature is current.

## PACKAGING AND STORAGE

- Packaging - 55 US gallon, steel drums
- Component 'A' – 249 kg (550 lb.) per drum. Base Seal® MDI
- Component 'B' – 226 kg (500 lb.) per drum. Icynene ProSeal LE™ Resin
- Icynene ProSeal LE™ (Component A) and (Component B) ideally should be stored between 15°C (60°F) and 30°C (86°F).
- Components should be protected from freezing.
- Shelf life is 6 months.

Reviewed	<input checked="" type="checkbox"/>	)
Reviewed as noted	<input type="checkbox"/>	)
Revise and resubmit	<input type="checkbox"/>	)
Not reviewed	<input type="checkbox"/>	)

Date: **May 11 2020**

Reviewed by: **MH**

This review by **J.C.F.A.Inc.** is for the sole purpose of ascertaining conformance with the general design concept for architectural features only, and does not in any way constitute review of the design of engineering elements which form part of the contract documents prepared by others. This review shall not mean that **J.C.F.A.Inc.** approves the detailed design inherent in the shop drawings, responsibility for which shall remain with the contractor submitting same, and subcontractors shall not relieve the Contractor of the responsibility for errors or omissions in the shop drawings or the responsibility for meeting all requirements of the contract documents. The Contractor is responsible for verifications to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation, and for coordination of the work of all trades.

**PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS**

Jason C. Flynn Architect Inc. (J.C.F.A.Inc.)