

Product Design

FL 2000 is a closed-cell spray applied foam, which was developed using Environment Canada's approved next generation blowing agent. The foam is tinted orange to signify our **FL 2000** Canada spray insulation product line. When installed following application guidelines the spray foam insulation adheres tenaciously to framing members and substrates. **FL 2000** closed-cell spray foam provides superior energy economy and durability while significantly reducing unmanaged moisture and air infiltration.

Product Use

As a component of a "systems approach" to proper building envelope construction, **FL 2000** closed-cell spray foam provides exceptional performance in reducing heat transfer, moisture gain and significantly improving racking strength.

Recommended Processing Parameters

Processing Designation:	Regular
Winter:	-6°C - +10°C (20°F - 50°F)
Regular:	10°C - 27°C (50°F - 80°F)
Summer:	27°C (80°F - and above)

Optimum hose pressure and temperature may vary as a function of the type of equipment, ambient and substrate conditions, and the specific application. It is the responsibility of the applicator to properly interpret equipment technical literature, particularly information that relates acceptable combinations of gun chamber size, proportioner output, and material pressures.

Processing Designation:	FL 2000
Equipment Dynamic Pressure	1,000 - 1,400 psi
Preheat Temperature	52°C - 57°C (125°F - 135°F)
Hose Heat Temperature	52°C - 57°C (125°F - 135°F)
Drum Temperature Storage	18°C - 30°C (65°F - 85°F)

Physical Properties

Properties	Test Method/ Requirements	Canadian Value per CAN/ULC S705.1
LTR Value:	CAN/ULC S770	1.8 @ 50 mm (R 10.2)
Compressive Strength:	ASTM D-1621	185 kPa
Air Permeance:	ASTM E-283-04	< 0.02 L/(s·m ²) at 50 mm
Core Density:	ASTM D-1622	41.5 kg/m ³
Open Cell Content:	ASTM D-2856	6.97
Tensile Strength:	ASTM D-1623	355kPa
Water Vapour Permeance	ASTM E-96	40 ng/(Pa·s·m ²) 50 mm
Dimensional Stability:	ASTM D2126 -20°C ambient 80°C ambient 70°C @ 97+/- 3% RH	+0.45 -0.8 -13.5
Flame Spread:	CAN/ULC S127	240
Smoke Development:	CAN/ULC S102	470
Water Absorption:	ASTM D-2842	2.9%
VOC:	CAN/ULC-S774	Time before Occupancy is 1 day*

* For retrofit applications, the working area shall be ventilated at a rate of .3 air changes per hour. Based on a independent toxicological assessment, the specified ventilation must be in effect for at least one (1) day before occupancy is permitted in the newly insulated suite.

Evaluation Services

- CCMC 13414-L
- CAN/ULC S705.1

Material shelf life: 6 months when stored within recommended temperature range.

- 2:1 transfer pumps are recommended for material transfer from container to the proportioner.

- **CAUTION:** Extreme care must be taken when removing and reinstalling drum transfer pumps so as NOT to reverse the "A" and "B" components.

- Do not recirculate or mix other suppliers' "A" or "B" component into **FL 2000** containers.

FOAM-LOK™

SPRAY FOAM INSULATION

ENERGY SAVINGS FOR LIFE

 **FL 2000**
Closed-Cell Spray Insulation

Rev. Date: 05/31/10

THIS FOAM MUST NOT BE APPLIED IN EXCESS OF 50 mm (2.0 INCHES) PER APPLICATION. THE FOAM SHOULD BE ALLOWED TO COOL FOR 20 TO 30 MINUTES OR UNTIL THE SURFACE TEMPERATURE HAS RETURNED TO AMBIENT BEFORE ADDITIONAL APPLICATIONS OF FOAM ARE ATTEMPTED. FOAM APPLIED IN EXCESS OF 50 mm (2.0 INCHES) OR WITHOUT ALLOWING FOR COOLING MAY RESULT IN, BUT IS NOT LIMITED TO, EXCESS HEAT BUILD-UP AND RESULT IN FIRE OR THE GENERATION OF OFFENSIVE ODORS THAT MAY NOT DISSIPATE WITH TIME.

Thermal Barrier

The **FL 2000** shall be installed in accordance with the National Building Code of Canada and CAN/ULC-S705.2. The National, Provincial and Local building codes require that SPF be separated from the interior of a building by an approved fifteen (15) minute thermal barrier, such as 1/2" gypsum wall board or equivalent, installed per manufacturer's instructions and corresponding code requirements. There are exceptions to the thermal barrier requirement: (1) Code authorities may approve coverings based on fire tests specific to the SPF application. For example, covering systems that successfully pass large scale tests may be approved by code authorities in lieu of a thermal barrier; (2) SPF protected by 1" thick masonry does not need a thermal barrier. Applicators should ensure the safety of the jobsite and construction personnel by posting appropriate signs warning that all "hot work" such as welding, soldering, and cutting with torches should take place no less than 35 feet from any exposed foam. If "hot work" must be performed all spray polyurethane foam should be covered with an appropriate fire or welder's blanket, and a fire watch should be provided.

Handling and Safety

Respiratory protection is **MANDATORY!** Lapolla recommends that supplied air and a full face mask be used during the application of any spray applied foam system. Contact Lapolla Industries for a copy of the Model Respiratory Protection Program developed by API or visit their web site at www.polyurethane.org. Persons with known respiratory allergies should avoid exposure to the "A" component. The "A" component contains reactive isocyanate groups while the "B" component contains amine and/or catalysts with blowing agents. Both materials must be handled and used with adequate ventilation. The vapors must not exceed the TLV (0.02 parts per million) for isocyanates. Avoid breathing vapors. Wear a NIOSH approved respirator. If inhalation of vapors occur, remove victim from contaminated area and administer oxygen if breathing is difficult. Call a physician immediately. Avoid contact with skin, eyes, and clothing. Open containers carefully, allowing any pressure to be relieved slowly and safely. Wear chemical safety goggles and rubber gloves when handling or working with these materials. In case of eye contact, immediately flush with large amounts of water for at least fifteen minutes. Consult a physician immediately. In case of skin contact, wash area with soap and water. Wash clothes before reuse.

Positive pressure ventilation of the work area is recommended to minimize the accumulation of vapors in the work area during the application. Improper application techniques of this foam system must be avoided. This includes excessive thickness, off ratio material, and spraying into rising foam. The

potential results of improperly applied materials may include but is not limited to, excessive heat build-up, and may result in a fire or offensive odors which may not dissipate with time and/or poor product performance due to improper density of the applied material. Large masses of sprayed materials should be avoided. When large masses are generated they should be removed from the area, cut into small pieces and allowed to cool before disposal. Failure to follow this recommendation may result in a fire. It is recommended that a fire extinguisher be located in an easily accessible portion of the work area.

In Case of Spills or Leaks Steps To Be Taken-

- Utilize appropriate personal protective equipment (PPE.)
- Contain and cover spilled material with a loose, absorbent material such as oil-dry, vermiculite, sawdust or Fuller's earth.
- Shovel absorbent waste material into proper waste containers.
- Wash the contaminated areas thoroughly with hot, soapy water.
- Ventilate area to remove vapors.
- Report sizeable spills to proper environmental agencies.

In Case of Fire

Extinguishing Media-Dry chemical extinguishers such as mono ammonium phosphate, potassium sulfate, and potassium chloride. Additionally, carbon dioxide, high expansion (proteinic) chemical foam, or water spray for large fires.

DISCLAIMER

The data presented herein is not intended for use by nonprofessional applicators, or those persons who do not purchase or utilize this product in the normal course of their business. The potential user must perform any pertinent tests in order to determine the product's performance and suitability in the intended application, since final determination of fitness of the product for any particular use is the responsibility of the buyer.

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