

The following notes relate to Lapolla Foam-LoK spray foam insulation. Specific project conditions should always be taken into consideration when implementing any of these notes.

Product Specification

Foamlok FL500 is 8kg/m³ spray foam polyurethane open cell insulation. It is a two part insulation product installed by certified dealers using custom designed application equipment. When installed FL 500 expands 100:1 to completely fill every void and helps seal against air movement through internal and external surfaces.

FL500 is applied by spraying liquid chemical components onto open wall, ceilings and floor surfaces. The foam will adhere to most building surfaces typically found in a wall or roof of a domestic building once dry and clean. The FL500 foam can be partially filled into the open spaces between joists, studs or rafters or can be fully filled with the excess cured material cut back (with appropriate spray foam tools) to leave a smooth flush finish with the timber face. Partial fill will leave a rough uneven surface which is a result of the natural expansion of the material. Once installed FL500 insulation assists in increasing thermal resistance, provides an airtight barrier, helps in minimizing sound from external noises and can reduce the risk of moisture accumulation within the external structure.

Applications

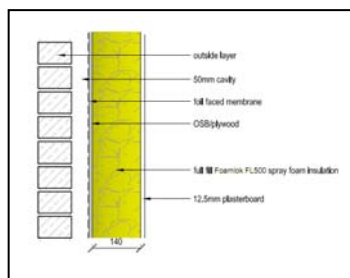
Foamlok FL500 insulation can be used on walls, attic ceilings, pitched roofs & timber floors in residential, commercial and industrial properties.

Timber frame Walls

Foamlok FL500 is suitable for use in any timber frame wall where the foam is applied to the open surface of the substrate before the finished wall covering (plasterboard) is applied. The following is recommended during this application;

- A plasterboard or similar finish is applied to the internal side of the wall.
- All first fix electrical and plumbing is completed with electrical cables and loose plumbing pipes fixed back to the timber studs every 1m and are 40mm in from edge of stud.
- A vapour barrier should not be required on the warm side unless the RH is maintained above 60%. However this depends on the building use and the construction details and should always be the responsibility of the engineer or architect.
- Foamlok FL500 can be considered an air barrier when

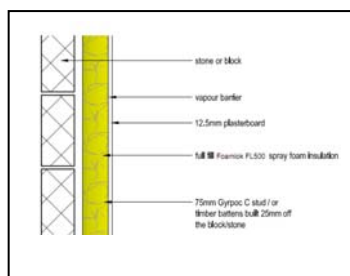
sprayed between timber frame studs. It is recommended that additional materials such as flexible caulk or airtight tapes be considered along timber to timber studs to maintain a complete airtight wall and structure. An additional airtight membrane on the inside of the building is not necessary but can be used if specified.



Block walls

Foamlok FL500 or FL2000 is suitable for use on the internal side of block wall buildings. Appropriate timber or metal studs should be erected to take the plasterboard finish, as neither product are recommended as finished surface. All detailing should comply with relevant Building Regulations. Careful consideration should be given to the movement of moisture through the structure. Consult the technical team for specific project detailing on existing walls.

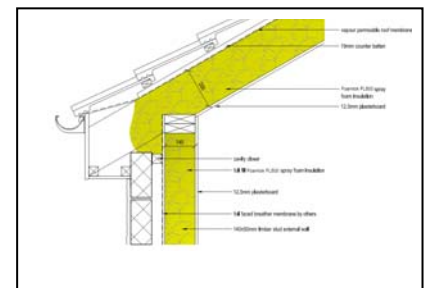
Note – FL 500 is not suitable as a pour in system in cavity wall construction.



Insulation at rafter line (Warm roof) - Sloping ceilings/Flat roof

Foamlok FL500 is suitable to be used in the sloping ceiling of a building where it is typically sprayed between the rafters at a specified depth to create a warm roof application in line with Building Regulations and BS5250 2005 revision. FL 500 is applied under the roof covering material such as sarking board, wood fibre board, other insulation boards or a breathable membrane (type LR). FL 500 is a sealed system and will provide a “well sealed ceiling from below” as required in BS5250:2002/2005. A ventilation gap is not required between the sarking board/membrane and the FL 500 foam. The following is recommended during this application;

- The habitable rooms below are separated by a 12.5mm plasterboard or similar material.
- Counter battening is recommended above the sarking board/membrane for warm roof construction.



- Careful consideration is given to the ventilation requirements in line with appropriate Building Regulations.
- Heat producing appliance such as down lighters should not be located in the sloping ceiling unless protected separately and separated from the FL 500 foam by appropriate materials.
- A vapour barrier should not be required on the warm side unless the RH is maintained above 60%. This depends on the building use and the construction details and should always be the responsibility of the engineer or architect.

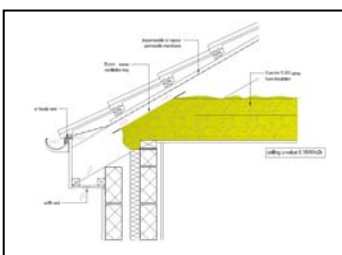
- Foamlok FL 500 can be considered an air barrier when sprayed between timber frame studs. It is recommended that additional materials such as flexible caulk or airtight tapes be considered along timber to timber studs to maintain a complete airtight wall and structure. An additional airtight membrane on the inside of the building is not necessary but can be used if specified.



Insulation at ceiling joist (cold roof)

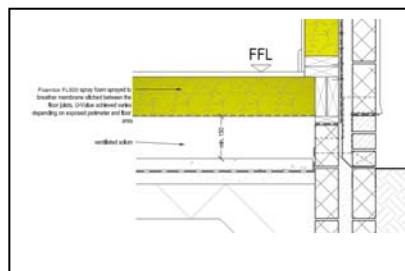
Foamlok FL500 is suitable for use along the ceiling joists of new or refurbishments projects. FL 500 is sprayed into the ceiling joists from the attic floor. The insulation must be separated from all habitable rooms by 12.5mm plasterboard or similar. The following is a recommendation during this application.

- Entry to the attic space is for service purposes only.
- There is no interconnecting attic areas with separate buildings
- Ventilation of the roof space is maintained in line with Building Regulations and BS5250:2005
- A sealed and insulated loft access trap is used in conjunction with the FL 500 spray foam.
- All down lighter covers in the ceiling have an appropriate fire cover separating them for the attic space and the FL 500.
- If ceiling joists are covered by foam it is recommended that additional cross joists are provided to allow access to the complete attic and provide area for storage. FL 500 is not suitable for walking on.



Timber floors

Foamlok FL 500 is suitable for use in any timber floor construction when sprayed between the joists. If access permits FL500 may be installed from below in a suspended floor construction. The floor covering may be removed to allow installation of a membrane between joists to provide a substrate to the FL 500. Ventilation below a timber ground floor should be in accordance with appropriate regulations. Consult with the technical team for further information on specific projects.



Thermal / Moisture Protection

Use of a vapour control layer or vapour barrier is normally not considered part of the FL 500 System except in wet locations such as swimming pool or areas where the Relative Humidity is maintained above 60%. Preferred practice does not include a vapour barrier since over 90% of moisture travel is blocked by the resistance of air movement offered by the product. Use of a vapour control layer however is dependent on building use and the construction details and should always be the responsibility of the engineer or architect.

In timber frame construction or roof construction the use of a flexible Caulk or specific airtight tape is recommended between adjacent exterior framing members, between multiple studs and at other critical locations where the installation of insulation is not possible in order to maintain an airtight external envelope.

Ventilation

The ventilation requirements for FL 500 should be specified in line with current Building Requirements and BS 5250 2005.

- The building shall be designed with adequate mechanical or natural ventilation to meet the requirements set out in BS5250 and current Building Regulations.
- Warm roof construction in conjunction with a breathable membrane and or sarking type boards does not require a ventilation gap between membrane and insulation in line with BS5250 as the FL 500 provides the well sealed requirement.

Electrical

- All new vertical wiring shall be secured to the inside of studs every 1 m.
- In retrofit applications, all existing wiring that is not to be abandoned shall not be insulated over in accordance with applicable electrical codes.
- All ceiling fixtures and penetrations should be filled with decorators caulk or similar material, or, all ceiling fixtures shall be sealed using a suitable sprayed foam material prior to the installation of Foamlok FL 500 attic insulation.
- All wiring systems such as cable TV, telephone, security systems and intercoms shall be mechanically fastened to the inside of studs every 1 m for vertical runs, and 40 mm from face of the gypsum board surface.



European Technical Approval Certificate
Number 11/0241 Issued July 2011



Characteristic	Test Results	Test Report
Corrosion developing capacity on metal constructions	White corrosion and perforations in 0.075mm thick zinc foil coupons in contact with insulation/14 days relative humidity 90% temp (40±2)°C No perforations in 0.075mm thick copper foil coupons in contact with insulation/14 days relative humidity 90%, temp (40±2)°C	010-027864
Reaction to Fire Single flame test	Class E	PK1-01-10-062-A-0 Pr-10-1.171
Release of Dangerous Substance	Does not release dangerous substances	
Water Absorption (EN 1609)	24.3kg/m ²	010-027428
Water Vapour Permeability (EN 12086)	w 13.97 mg/m ² .h.Pa	010-027435
	μ 2.8	
Susceptibility to mould growth	No Performance determined	
Thermal Conductivity λ 10 (EN 12667) λ declared (EN ISO 10456)	0.0346W/m.K 0.037 W/m.K	A 020-25484 010-027849
Compression Strength At 10% deformation (EN826)	10.2 kPa	010-027351
Tensile Strength parallel to faces (EN 1608)	19.2kPa	AP 492-37/10
Tensile strength perpendicular to faces (EN 1607)	10.1 kPa	010-027351

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