



## **LIQUID VAPOUR MEMBRANE**

### **DESCRIPTION**

Liquid Vapour Membrane is a styrene butadiene based, single pack waterproofing system. The product is supplied ready to use straight from the tub or pail. The consistency is similar to that of thick emulsion paint, the standard product being supplied as a black or white membrane coating. The membrane is flexible and elastic, resistant to abrasion and UV light. Liquid Vapour Membrane is water based and safe to apply onto damp substrates by brush, roller or spray. Membranes are typically touch dry in one hour.

### **USES INCLUDE:**

Waterproofing membrane giving high flexibility and good bonding. Under self smoothing floors or thin section floor screeds where the original membrane has been punctured.

Waterproofing system for basements below ground level.

Waterproofing or tanking to walls either alone or as part of a multi-layer system.

For roofs will act as the principal waterproofing system or as part of a repair system.

Under tiled areas as a secondary protection for wet areas.

Silage tanks.

### **STANDARDS**

Liquid Vapour Membrane has been tested in accordance with appropriate parts of the following standards:

B.S. 3177 Determination of water vapour permeability for flexible sheet materials.

B.S. 8204 Code of practice for polymer modified wearing surfaces.

Code of practice 102:1973, Code of practice for protection of buildings against water from the ground.

### **TYPICAL MEMBRANE PROPERTIES**

**Specific Gravity @ 25°C 1.1**

**Viscosity 2800-4300mPas**

**Resistance to Pressurised Water Penetration** 0.6mm thick dry film of the membrane will resist a water pressure of 0.2N/mm<sup>2</sup> (equivalent to 20 metres head of water)

**Water Vapour Permeability**

0.6mm thick dry film of the membrane conditioned at room temperature for 7 days prior to test gave a water vapour permeability <4g/m<sup>2</sup>/24hours at 25°C/75%RH (BS3177)

**Carbon Dioxide Permeability**

On the basis that the carbon dioxide permeability of a coating is ten times less than its water vapour permeability, 0.6mm thick dry film of the membrane will have carbon dioxide resistance of 100 metres of still air. (Recommendation for anti CO<sup>2</sup> coatings at least 50m)

**Accelerated Ageing**

Ageing in "Xenotest" equipment showed that an exposure equivalent to two years of Arizona sunlight did not embrittle the film.

## Instructions for Use

### Preparation

All contact surfaces must be sound, clean smooth with a trowelled or brushed finish. Any masonry should be flush pointed and defects in existing surfaces made good. Remove any laitence, dust, loose material or surface water.

### Priming

No priming is necessary. To assist the membrane in fully wetting out the substrate this background may be dampened. There should not be any standing water.

### Coating

Stir well before use. The membrane may be applied by brush, roller or airless spray.

If necessary the liquid compound may be diluted with a little water to reduce the viscosity. Care should be taken to ensure that the correct dry coat application thickness is achieved and that the drying time is not unacceptably extended.

A minimum dry film thickness of 0.6mm is required to provide a vapour barrier.

Typical coverage value, depending on substrate, is 1.1 litres/m<sup>2</sup>. This should be applied in a minimum of two coats, each of 0.55 litres/ m<sup>2</sup>, in order to comply with CP102: 1973 Code of Practice for the protection of buildings against water from the ground.

For the dry film thickness to be 0.6mm, the wet film thickness needs to be 1.1mm.

This will be achieved at a coverage rate of 1.1 litres/ m<sup>2</sup> applied in two coats each of 0.55 litres/ m<sup>2</sup> (1.2kg/ m<sup>2</sup> applied in two coats each of 0.6kg/ m<sup>2</sup>) For the application of a dry film thickness of greater than 0.3mm in a single coat it is recommended that the membrane is applied by airless spray. Using airless spray, a single application dry coat thickness up to 1 mm may be achieved.

When applying, two or more coats it is recommended that subsequent coats are applied at right angles to the previous coat. Before applying a second coat it is necessary to allow the first coat to become touch dry, typically one hour. The second coat should be applied within 24 hours of applying the first coat. If applying a subsequent screed to LVM, the second coat may be used as a primer for the screed.

### Curing

No special curing is required. Application of the membrane should not be undertaken if rain is expected before the coating can dry. Do not apply in freezing conditions.

## Precautions

### Health and Safety

Liquid Vapour Membrane should not come into contact with skin, eyes or be swallowed. Protective glasses should be worn during application. Should Liquid Vapour Membrane come into contact with the skin, remove before drying by washing with soap and water. Should accidental eye contact occur, wash with plenty of water and seek medical advice immediately. Do not induce vomiting. Full health and safety data are given in the Product Safety Data Sheet.

### Fire

Liquid Vapour Membrane is non-flammable in the wet state. Dry membrane will burn in fire conditions.

### Yield

Approximately 20 square metres per 5 Litre (1 coat). We recommend using 2 coats.

### Storage and Shelf Life

Liquid Vapour Membrane will have a shelf life of 12 months when kept in dry conditions at a temperature of 5°C to 35°C. Storage at higher temperatures may reduce the shelf life. **Liquid Vapour Membrane must be protected from frost.**

## **SAFETY DATA**

### 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING.

Product Name: Liquid Vapour Membrane  
Use: Waterproofing membrane  
Company: Restoration UK Ltd  
Address: Unit 3, 18 Hanford Way, Loughborough, Leics, LE11 1LS  
Tel: 01509 217750

### 2. COMPOSITION / INFORMATION ON INGREDIENTS.

Contains: Blend of styrene butadiene copolymer with fillers and pigments. Bactericide <0.1% total formulation not regarded as hazardous.

### 3. HAZARDS IDENTIFICATION

On available data the product is not classified as hazardous.

### 4. FIRST AID MEASURES

#### Eye Contact

Rinse immediately with water for at least 15 minutes.  
Get medical attention.

#### Skin Contact

Wash with soap and water.

#### Inhalation

May cause dizziness. Move to fresh air.

#### Ingestion

Get medical attention urgently. Give 0.5-0.8 litres of water. **DO NOT INDUCE VOMITING.** In case of spontaneous vomiting ensure vomit can drain freely to avoid suffocation.

### 5. FIRE FIGHTING MEASURES

Product as supplied is water based and non flammable. The dried polymer is flammable.

#### Suitable Extinguishing Media

All extinguishing media are suitable.

#### Unsuitable Extinguishing Media

Not applicable.

#### Exposure Hazards

Prevent contaminated water from entering drains, soil or surface water. Dispose of contaminated water and soil according to local and national regulations. Release of toxic fumes may occur. Fire fighters should wear self-contained breathing apparatus.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal Precautions

Do not breathe vapour. Wear suitable protective clothing, gloves and eye/face protection.

#### Environmental Precautions

Prevent contamination of soil, drains and surface water.

#### Methods for Cleaning

Take up with absorbent inert material. Place in closable containers. Dispose of by incineration.

### 7. HANDLING AND STORAGE

#### Handling

Ensure adequate ventilation. Wear suitable protective clothing and eye/face protection.

#### Storage

Keep in original container. Keep at room temperature.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Engineering Protective Measures

No special measures required.

#### Occupational Exposure Limits

Bactericide 8 Hour TWA; OES 100ppm

#### Respiratory Protection

Wear suitable respirator if ventilation is inadequate.

#### Hand Protection

Wear suitable gloves (eg PVC).

#### Eye Protection

Wear suitable safety glasses to BSEN 166.

#### Skin Protection

Wear overalls and closed footwear.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Melting Point/Range:	N/A	
Boiling Point/Range:	>100°C	
Oxidising Properties:	N/A	
Autoflammability: Solubility		N/A
in Water: Vapour Pressure:	Miscible in all proportions.	
Partition Coefficient:	As water.	
Explosive properties:		N/A
Appearance:		N/A
	Black, White or Grey viscous	
Odour:	liquid.	
Density:	Faint aromatic	
Flashpoint:	1.1-1.2	
Ignition:		N/A
pH value:		N/A
Viscosity:	c/a 8.0- 10.0	
	2800 -4300 mPas	

### 10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	None known
Materials to avoid:	None known
Hazardous Decomposition	
Products:	Oxides of carbon, smoke or other hazardous gases or vapours.

### 11. TOXICOLOGICAL INFORMATION

Information used to assess health effects: Long term experience of the use of this product type indicates low danger to health when handling under industrial conditions. Health Effects

#### Eyes

Can cause irritation.

#### Skin

Can cause irritation.

#### Inhalation

Can cause respiratory irritation.

#### Ingestion

Irritation to mouth, throat and digestive tract.

#### Chronic

Repeated skin contact can lead to skin disorders.

#### Other

None known.

### 12. ECOLOGICAL INFORMATION

Prevent contamination of soil, drains or surface water.

Mobility:	Viscous liquid.
Solubility:	Miscible in all proportions.
Persistence and Degradability:	The product will degrade only slowly in the environment.
Bioaccumulative Potential:	There is no known evidence of a tendency for bioaccumulative.

### 13. DISPOSAL CONSIDERATIONS

Disposal must be carried out under guidance from local and national legislation.

Waste From Residues/Unused Product: Dispose of via a licensed waste contractor to a licensed disposal site. Contaminated Packaging: Dispose of via a licensed waste contractor.

#### 14. TRANSPORT INFORMATION

The product is not classified as dangerous for transport.

#### 15. REGULATORY INFORMATION

The product is not classified as hazardous according to EU directive 1999/45/EC

Risk Phrases:

None

Safety Phrases:

S112 Keep locked up and out of the reach of children. S23: Do not breathe vapour.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39 Wear suitable gloves and eye/face protection.

#### 16. OTHER INFORMATION

These data sheets are given in connection with the product being used for the purposes outlined in the Product Technical Data Sheet, available from Restoration UK Ltd on request. Use of the above product for other purposes may result in risks not given above.

If the product is to be used by a third party at work it is the duty of the initial recipient to ensure that the third party is supplied with the data given above.

Employers have the duty to inform employees and others who may be affected of any hazards given in the data above and any precautions that should be adopted.

Users of the product should undertake their own assessment of work place risks as required by the Health and Safety Legislation.

Further copies of this Safety Data Sheet are available from Restoration UK Ltd.

Safety Data Sheet According to:

Directive 91/155/EEC    CHIP Regulations.

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