ALCOLIN PERMO-TORCH HP

Description

Alcolin Permo-Torch HP is a pre-fabricated waterproofing membrane made of distilled bitumen and elasto–plastic polymers (APP) having a woven non-woven single strand composite polyester reinforcement, which provides the membrane with high mechanical characteristics and excellent dimensional stability. Available in a thickness of 4mm.

Features & Benefits

- Polyester reinforced – high mechanical strength and dimensional stability
- Cold flexibility – suitable for conditions down to -5°C
- Bitumen based – waterproof

Applications

- Waterproofing of flat roofs, terraces, boarded roofs, box gutters
- Below ground damp proofing

EN13707 Continuous roofs (Certificate No. GB14/92056)

No. layers			Method of application						Type of Application			Type			
Single Layer	Double Layer	Multilayer	Torch	Hot Air	Mixed (Torch / Air)	Cold Bond Glue	Mechanical Fixing	Thermal Adhesive / Self Adhesive	Fully Bonded	Partially Bonded	Loose Laid	Complimentary Layer	Top Layer	Heavy Protection	Anti-root
●	●	●	●				●		●			●	●		

EN13969 Retaining walls (Certificate No. GB14/92056)

●	●	●	●						●			●	●	●	●

Adhesion

Concrete, galvanized steel, metals, clay or cement bricks

Limitations

- Heat application is not recommended when applying onto heat sensitive materials i.e. polystyrene insulation and wood .
- Not suitable for loose lay application.
- Never apply directly onto concrete without the use of a bitumen primer
- Flat roofs must have a minimum slope of 1.5%.

Safety instructions

Alcolin Permo-Torch HP is non-toxic. Care should be taken during application as the product is applied with a propane gas torch. Consequently there is a risk of burn injuries during application. It is advisable to wear safety glasses and flame proof clothes and gloves. In the event of a burn, cool affected area with copious amounts of water, and seek medical attention if required. Refer to our Safety Data Sheets for further toxicological information and comprehensive handling instructions.

Surface preparation

- Ensure surfaces are clean, dry and free of loose materials, dust, grease, rust and other contaminants. Defects such as cracks should be repaired prior to application.
- The application surface must not have depressions where ponding of rain water can occur. To ensure regular run off of rain water, we recommend a surface slope of 1.5%.
- Water drainage spouts must be sufficiently big enough to allow for rain water to be eliminated in an efficient way.
- Prepare cementitious substrates, including verticals and details with a bituminous primer such as Alcolin Torch-on Bitumen Primer prior to application. Allow the primer layer to dry before proceeding with any other operation.
- With prefabricated constructions, apply a suitable reinforcing strip along all joints. In the presence of construction joints, prefabricated panels or metal decks, suitable expansion joints are to be considered.

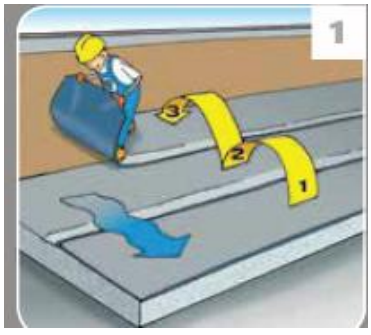
Directions for use

1. Use the following table as a guide to how many layers to use in your construction :

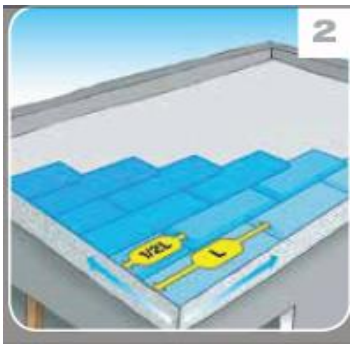
Flat roof waterproofing *(minimum 1.5% slope)*	Single layer, protect by a bitumen aluminium paint or stone ballast
Terrace application	Single layer under tiling
Boarded roof	Double layer, the 1st layer is mechanically applied, the 2nd is fused with heat
Box gutter application	Single layer
Bitumen damp proofing	Sheeting: Single layer, application should be below ground

2. Ensure that surfaces are prepared as above. On cementitious or similar surfaces, apply a bituminous primer such as Alcolin Torch-on Bitumen Primer. Apply primer on vertical sections as well.

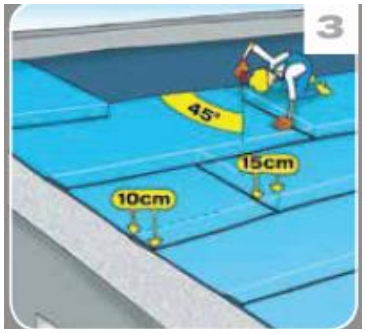
3. Apply by torch application a 25cm strip of membrane along all vertical up stands. Reinforce all corners by cutting out a 15cm diameter circle of membrane, form into a cone shape and torch into the corner.



4. To have all the overlaps with the slope, start application from the lowest point (see figure 1)



5. Position the membrane sheets staggered, avoiding to create any overlaps against the slope and the drains (see figure 2).



6. Cut the corners of membrane sheets that will be laid under the next sheet with a 45° angle (10cmx10cm) before laying the next sheet above it. The side joints must have an overlap of 10cm while the head joints an overlap of 15cm (see figure 3).

7. When applying a second layer of membrane, apply the sheets over the previous ones at approximately ¼ of its length and width (see figure 4)

8. Apply the bituminous membrane with a propane gas torch to the substrate. It is necessary to heat the entire surface of the membrane, except for the side and head laps, making sure that the bitumen forms a liquid mass in front of the roll to ensure that it wets and bonds properly to the substrate.
9. The side and head laps must be heat welded with an appropriate torch. The overlaps should be pressed down with a 15Kg roller. A slight bead of bitumen should flow out from the sides. If this is not observed, one will need to iron the overlaps to ensure complete welding.
10. Apply the vertical membrane sheets in the same manner as above, pressing it with a trowel until bitumen squeeze out is observed. Ensure a minimum overlap of 10cm with the horizontal sheets. The height of the vertically applied membrane should be at least 15cm higher than the finished surface.

Additional application notes

- Operations should be well coordinated in such a manner that no damage is brought upon other construction elements or underground structures. Avoid leaving the structure for the night or for periods of prolonged work instructions without having been properly sealed.
- The rolls should be kept in a warm or heated storage area during application. Should the workability of the membrane deteriorate or become stiff and difficult to install during application, these should be returned to the heated storage area. In applications on vertical surfaces or very sloped substrates, apply suitable mechanical fixings to the head laps after which they will be sealed when torching the head laps.
- The minimum application temperature is 5°C. Do not apply in adverse weather conditions i.e. high humidity, rain, etc.
- The membranes must be protected from direct sunlight conditions with an aluminium coating such as Alcolin Silver Coat or Alcolin Vinoseal to improve and extend the performance and life expectancy. The membrane must be allowed to age for 8 weeks before being overcoated.

Storage stability

Alcolin Permo-Torch HP has a shelf life of at least 24 months if stored in a cool (below 25°C), dry and ventilated area away from heat sources. Rolls must be stored in an upright position. Avoid stacking them horizontally one on top of the other to avoid deformation which may compromise the application.

Product packaging

Roll size (m)	10x1
Rolls per pallet	24
Square meter per pallet (m^2)	240

Product data

i. Physical data

Type		Polymer modified bitumen adhesive
Type of reinforcement		180g single strand polyester
Upper face finish		Talc
Lower face finish		PE Film
Length	EN 1848-1	10m
Width	EN 1848-1	1m
Thickness	EN 1849-1	4mm

ii. Application data

Minimum application temperature	5°C

iii. Performance data

Artificial UV ageing	EN 1297	Pass
Cold flexibility	EN 1109	-5°C
Dimensional Stability	EN 1107-1	-0.3%
Elongation at break L/T	EN 12311-1	40/40%
Fire reaction	EN 13501-1	F
Fire resistance	EN 130501-5	F roof
Flow resistance	EN 1110	120°C
Flow resistance after ageing	EN 1296	110°C
Tearing resistance L/T	EN12310-1	150/150N
Tensile strength L/T	EN 12311-1	700/500 (N/5cm)
Water tightness	EN 1928	60 kPa

The above information is only offered, as a guide to the use of this product. Furthermore, users should satisfy themselves that it is suitable for their needs. Since we have no control over the conditions under which it is used, we cannot accept responsibility for problems caused by the use and/or application of this product.

Head Office: +27(0)21 555 7400
1 Beverley Close, Montague Gardens
PO Box 37008, Chempet, 7442
www.alcolin.com