

Estoproof 4P

APP High Performance Plastomeric Torch-Applied Waterproofing Sheet Membrane

Description

Estoproof 4P is a high-performance APP Modified bituminous Torch applied waterproofing membrane; it is reinforced with non-woven spun bonded fibre rot proof polyester.

The underside of **Estoproof 4P** is finished with a light polyethylene foil. This increases flame-torching efficiency, reduces gas consumption and also protects the rolls during transport, handling and storage.

Estoproof 4P are composed of bitumen that is modified by APP, an atactic polypropylene polymer. The mixing has ensured that a true matrix inversion taken place, where the APP forms a continuous skeleton network with the bitumen filling up the void. This result in much better cold flexes temperatures and aging resistance.

Estoproof 4P has been tested in accordance to BS EN 544: 2011, on Water Absorption Test and complied with the specification in this data sheet.

Uses

Estoproof 4P is used for the waterproofing at new construction and in renewal work. It is suitable and widely been used at: -

- Concrete Roofs and floor slab
- Retaining walls
- Plaza decks
- Balconies / Terraces
- Basement tanking
- Tunnels and subways

Advantages

- Reinforced, high strength, minimizing risk at site damage
- Easy to install and bond well to substrate
- Remain excellent, flexibility even at low temperatures
- Dimensionally stable
- Excellent and durable for Tropical climates and light foot traffic.
- Resistant to hydrostatic pressure (up to 15m head of water)

Standards Compliance

- BS EN 12310-1
- BS EN 12311-1
- BS EN 544: 2011
- EN 1297

Physical Properties

| | |
|--|------------------------|
| Membrane Thickness, mm Estoproof 4P (Sanded) | 4 |
| Areic Mass, kg/m ² Estoproof 4P (Slated) | 4.5 |
| Tear Resistance, N (BS EN 12310-1) Longitudinal Transversal | 140 ± 42 160 ± 48 |
| Elongation, % (BS EN 12311-1) Longitudinal Transversal | 30 ± 15 30 ± 15 |
| Tensile Strength, N/5cm (BS EN 12311-1) Longitudinal Transversal | 600 ± 150 400 ± 150 |
| Water Absorption, % BS EN 544: 2011 | < 0.25 |
| Water Vapor Permeability, μ x 1.000 EN 1931 | 20 (Default) |
| Resistance to Static Loading, kg EN 12730-A | 15 |
| UV Ageing (Visible Defects), EN 1297 | Pass |
| * These values are typical results obtained under laboratory conditions and are not intended as minimum specifications. | |

Application Instructions

Surface Preparation

For R.C Flat Roof application, the flat roof shall have a gradient of 1:120 minimums.

Base screed (cement sand mix of about 1:4) is normally recommended.

Substrates should be cleaned and free from loose aggregate, form release agents and other contaminants.

All critical right-angle bends must have a mortar angle fillet installed prior to application of **Estoproof 4P**.

Application Methods

Estoproof 4P can be loosely laid or fully bonded.

(A) Non-Expose System

For loosely laid application, the rolls are unrolled over the roof surface. Torching must carefully seal the overlaps. The membrane is then adequately ballasted against wind uplift.

For fully bonded application, all substrates must be primed with **Estoproof Primer W** at a rate of 4 - 6 m²/kg and allowed to dry.

Torch applies one layer of **Estoproof 4P** maintaining side laps of 50mm-75mm and end laps of 100mm-150mm. Fully heat weld sheet to the primed substrate.

Ensure that all laps are fully heat welded and finished with a heated spatula or propane gas torch, thus cause surface melting and subsequent adhesion to the surface.

Protection

For Horizontal Application

Estoproof membrane shall be protected with protective screed and or other approved protection system before other trades of works.

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For Vertical Application

An approved protection board should be installed over the membrane prior to backfilling or covering the system with gravel.

(B) Expose System

Estoproof 4P Slated (mineral finished) are recommended to be used as an exposed waterproofing system where the protective screed is not required.

Packing & Size

| | |
|---------------------------|---------------|
| Estoproof 4P | 1m x 10m roll |
| Estoproof Primer W | 200 kg drum |
| | 18 kg pail |

Estoproof 4P come in two types of finishing

- **Sand Finished** (Non-expose system)
- **Slated Finished** (Expose system)

Note: Aluminium faced range and double reinforced torch membranes are available upon request.

Technical Support

Denka offers a comprehensive range of high performance, high quality of product for both new and existing concrete surfaces. In addition, the company offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance.

Storage

Estoproof 4P membrane should be stored in original unopened packaging in dry conditions.

Estoproof 4P have a shelf life of 24 months.

However, membrane shall be stored vertically and not stacked.

Precaution

Protection gloves are necessary when using the gas torch to install **Estoproof 4P** membrane.

Additional Information

Denka Construction Solutions Malaysia Sdn Bhd offers a wide range of complementary products which includes waterstops, waterproofing products, grouts, anchors, specialized flooring products. In addition, a wide range of products formulated for repair and refurbishment of spalled concrete are available.



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