



DURABILITY • PUNCTURE RESISTANCE • LONG TERM PERFORMANCE



**DuoPly**

# DuoPly EPDM Flat Roofing System

DuoPly EPDM is an EPDM roofing membrane with a polyester fleece laminated to the underside. The exceptional ageing resistant characteristics of EPDM, with the added protection of the polyester lining provides the contractor and building owner with an unmatched, superior roof system.



All DuoPly membranes come with Pre-applied Seam Tape (PST) – a seam that has the same elasticity and flexibility as the membrane itself, applied to EPDM membranes in a factory-controlled setting, ensuring reliable and greater peel and shear strengths.

## Stability



Unlike most traditional waterproofing membranes, DuoPly EPDM is completely resistant to temperature variations, weather and UV radiation. There is no need to protect the waterproofing membrane from sunlight either during construction or after!

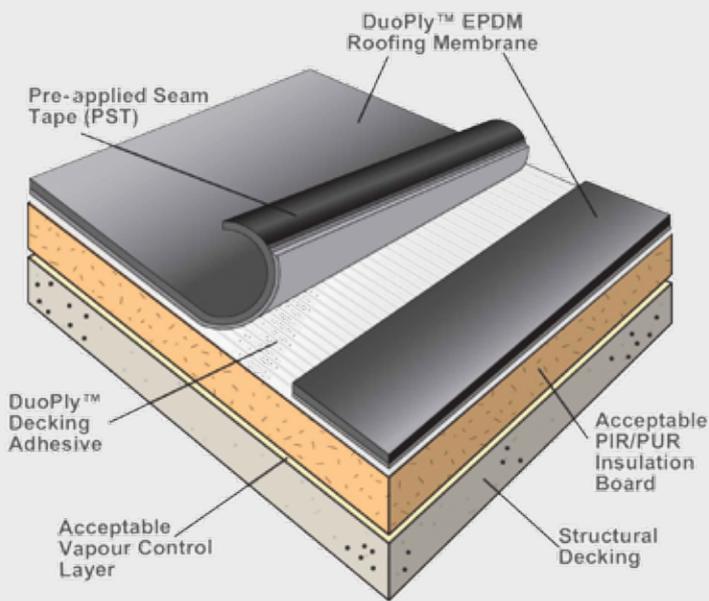
No change in strength or elasticity between -30°C and +120°C.

## Key Features

- ✓ Less weight more strength  
– 1.52m x 12.2m, 18.54m<sup>2</sup> per roll
- ✓ Fleece reinforcement – added toughness
- ✓ Will not tear, split or crack
- ✓ Quick, clean and cold applied
- ✓ Not affected by extremes of temperature
- ✓ No shrinkage – A quality that standard EPDM can't offer
- ✓ Pre-applied Seam Tape – Fast reliable seams
- ✓ Third fewer seams than felt roofing systems
- ✓ Ideal for new build, refurbishment or overlay
- ✓ Easily joined to other materials

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The DuoPly EPDM flat roofing system comprises of the EPDM waterproofing layer laminated to the polyester fleece reinforcement layer.

The polyester lining acts as a cushioning layer, specifically designed for use over minor imperfections, splits or ridges that may have formed in the existing roof system. The tough polyester fleece reinforcement on DuoPly provides excellent protection for the roofing membrane even on rough substrates. The polyester layer gives superior wind uplift resistance due to the adhesive/fleece bond.

The flexibility of the DuoPly EPDM membrane allows for seamless angle changes. Combine this with the enhanced adhesion characteristics allowed by the polyester layer of the membrane to make upstands of any height, to any surface a possibility. The reduction in seams and reduced surface preparation time makes the DuoPly membrane an economical material to install to all flat roofs.

The range of DuoPly Adhesives suitable for virtually all substrates makes the installation a flame and heat free process minimising any fire risk normally associated with flat roofing.



The roofing membrane is laid into either WBA or PU adhesive on the horizontal or low slope areas and adhered using DuoPly bonding adhesive to any upstand area. Low odour adhesives make the installation perfect for occupied homes, schools and businesses.

Flat roof details are made watertight by either using a pre-formed detail or by using DuoPly Uncured Pressure Sensitive tape and DuoPly EPDM Primer, minimising time and labour needed to complete the flat roof project.



The DuoPly flat roofing system is also perfect for using below a terraced area or a green roof system.

The outstanding strength and longevity of the roofing membrane is suitable for all types of green roof system and can also be slabbed or decked using DuoPly Paving Support Discs.

For areas that need maintenance access, Pressure Sensitive Walkway pads are available to provide a hardy, non slip surface for maintenance staff on the roof.



# DuoPly EPDM Flat Roofing System Components

DuoPly EPDM's success is due to its many exceptional characteristics, including material longevity, weatherability and elasticity. Membrane, adhesives, seaming tapes, perimeter trims, outlets, pre-formed details and fixings are all part of the DuoPly range.

The majority of the accessories are Pressure Sensitive (PS), we recommend the use of PS accessories due to their increased reliability, speed of installation and reduction of materials required to complete details.



## DuoPly EPDM Membrane

Polyester backed EPDM membrane, 2.54mm\* thick, 12.2m metres long by 1.52 metres wide, (18.54 m<sup>2</sup>). All DuoPly membranes come with Pre-applied Seam Tape (PST) applied to one edge of the roll.

DuoPly EPDM Primer and PST are applied to the DuoPly EPDM membranes in a factory-controlled setting, ensuring reliable and greater peel and shear strengths with no entrapped air bubbles.

PST improves seaming productivity this means completing projects faster, improving the ability to get buildings 'in the dry' in less time and minimising business disruption.

## DuoPly Uncured Pressure Sensitive Tape

Uncured EPDM flashing tape, whole roll size of 15.25 metres long by 225mm wide. The uncured EPDM tape is highly mouldable and adaptable to irregular surfaces and shapes. The flashing tape is primarily used to seal internal and external corners, pipes, cover patches and other flat roof details and penetrations.

This product must be used in conjunction with DuoPly EPDM Primer.



## DuoPly Cover Strip

150mm semi-cured EPDM cover strip, 30.5 metres long by 150mm wide. This is a non-mouldable tape used for butt jointing of DuoPly membranes, seaming of metal edging and other seaming details or simply making repairs to cut or damaged membrane.

This product must be used in conjunction with DuoPly EPDM Primer.



## DuoPly EPDM Primer

EPDM Primer designed for one step cleaning and priming of surfaces prior to application of Pre-applied Seam Tape, Uncured Flashing, Cover Strip, Pre-formed Pipe Boots and Walkway Pads.

Seam coverage of up to 47.5 linear metres at 100mm wide per 1 litre of DuoPly EPDM Primer.

See technical Data Bulletin for full storage and handling details.

\*Thickness will change during 2013 to 2.6mm to conform with forthcoming European CE requirement.

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## DuoPly WBA Decking Adhesive

Water Based Acrylic Adhesive is used for bonding DuoPly EPDM polyester backed membranes to a variety of flat roof substrates, offering superior peel strengths without solvents or strong odours. The adhesive is available in 5 and 15 litres, ready for use and non-flammable. Designed to be roller applied and used as a one sided, wet lay in adhesive on flat roof decking surfaces.

Coverage rates of 3-4m<sup>2</sup> per litre.



## Polyurethane Decking Adhesive (PU)

As an alternative to WBA Adhesive, DuoPly Polyurethane (PU) Adhesive is a one component, moisture curing, high performance adhesive used to bond DuoPly EPDM polyester lined membranes to a range of substrates; plywood, OSB, concrete, PIR/PUR tissue faced insulation, steel, existing bitumen layer etc. The adhesive is roller applied and cures by reacting with atmospheric conditions.

Coverage rates of 3.4-4.4m<sup>2</sup>/litre.



## DuoPly Bonding Adhesive

DuoPly Bonding Adhesive is a high quality, high tack, one part neoprene bonding adhesive formulated for brush or roller application. Primarily used for bonding of DuoPly EPDM membrane at angle changes and verticals to absorbent and non absorbent surfaces but can also be used for bonding DuoPly membrane to the deck surface of non absorbent surfaces.

Coverage rates of 1.6-2.4m<sup>2</sup>/litre.



## DuoPly Water Cut Off Mastic

Water Cut Off Mastic is a butyl blend mastic used for sealing membrane edges when creating a compression type termination. Water Cut Off is extremely tacky and will remain so through its life. Must be used with DuoPly termination bars or similar compression type seal.

Coverage 3 linear metres per tube.



## DuoPly Lap Sealant

Primarily used for sealing exposed edges of EPDM membranes and sealing trim to perimeter walls. Lap Sealants are extremely durable and their cured rubber consistency allows them to expand and contract like the EPDM membrane.

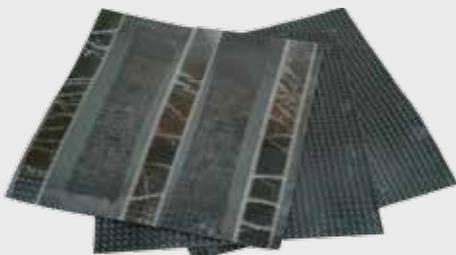
Coverage 6.7 linear metres per tube.



## DuoPly EPDM Pipe Boot

DuoPly EPDM Pre-Fabricated pipe boots are cured EPDM pipe seals with a Pressure Sensitive tape applied to the bottom of the pipe flange. Ideal for quick and easy flashing of pipes 12mm up to 150mm in diameter. Complete with a stainless steel clamp to secure the pipe boot collar to the pipe.

This product must be used in conjunction with DuoPly EPDM Primer.



## DuoPly Moulded Walkway Pads

The DuoPly EPDM Pressure Sensitive Walkway Pads are designed to protect EPDM membranes in those areas on flat roofs exposed to repetitive foot traffic. Dimpled top surface with Pre-applied Seam Tape on the underside for bonding to membrane. Installed at all foot traffic concentration points e.g. roof hatches, access doors, rooftop ladders etc. regardless of frequency.

This product is used in conjunction with DuoPly EPDM Primer.



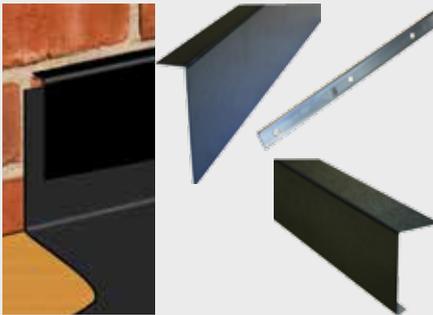
## DuoPly Fixings and Fasteners

DuoPly fixings are available for fixing of the metal perimeter trims and for mechanical fastening of insulation boards. The trim fasteners, RB Fasteners are low profile, colour coded with an EPDM washer creating a watertight seal. The insulation fasteners are designed to become a thermal break so no heat loss is experienced through the fasteners. These are two part, a plastic tube washer and steel fixing screw.



## DuoPly Flat Roof Outlets

The range of DuoPly outlets are available for small and large internal down pipes and include an outlet designed for going through a parapet wall. All made from synthetic rubber that can withstand large temperature variations, impacts and UV light. These outlets are pre-fabricated saving time on site and offer a watertight seal.



## Plastisol Steel Trims and Termination Bar

Available as 100mm deep wall trims and 75-175mm deep perimeter trims. The wall trims offer a economical alternative to lead and are not susceptible to theft. Each trim is 3 metres long and fixed to the wall with RB fasteners. Perimeter trims all have a 10mm drip return on the bottom, with a range of sizes available. DuoPly Termination Bars are used to create a compression seal to upstands where cutting a chase isn't possible. Used in conjunction with Water Cut Off Mastic.



## PVC Perimeter Trims

An alternative to using the Plastisol Trims, the benefit of these is that they create their own seal to the roof surface, negating the need for a perimeter upstand. The drip edge is a two part trim that clamps the membrane into place and creates a step into the gutter at the same time. The drip edge can also be used in conjunction with the Plastisol Trims. The PVC Trims are supplied with jointing clips, poly pins and internal and external corners are available.



## DuoPly Paving Support Disc

Used for installing paving slabs or decking onto DuoPly flat roof systems. Designed to lift the roof terrace system 15mm above the flat roof surface allowing for a clear flow of water under the roof terrace system. The support discs are manufactured with upright locating pegs to lock the paving slabs into place and leaving a 3mm gap between slabs for drainage. They are also suitable for use with timber decking.

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## Installation Guide

Easy, fast and professional installation with the original EPDM membrane and accessories.  
Full guide available at [www.duoply.co.uk](http://www.duoply.co.uk)

### 1) Adhering DuoPly Fleece Reinforced membrane to the roof deck

Fully adhere the membrane to the roof deck using either the DuoPly WBA Deck adhesive or DuoPly PU adhesive for non absorbant decks. Upstands and 50mm of deck area around the perimeter are adhered by using the DuoPly Bonding adhesives.



1) Ensure the substrate is clean and dry before installation. Unroll the membrane in the required position.



2) Fold or roll the membrane back up to expose the roof substrate. Apply the DuoPly Deck Adhesive to the substrate.



3) Lay the membrane into the Deck Adhesive when adhesive is still wet. If using the PU Adhesive allow time for solvents to vapourise before laying the membrane in.



4) Push the membrane into the adhesive with a squeegee to remove any trapped air and achieve a full bond between the fleece layer and the adhesive.

### 2) Adhering the membrane to upstands and details



1) Apply DuoPly Bonding Adhesive to the fleece side of the EPDM membrane and to a minimum of 50mm on the decking.



2) Bonding Adhesive must also be applied to the vertical surface. This must be clean, dry and free of any sharp protrusions. Allow the Bonding adhesive to become touch dry.



3) Test the bonding adhesive to ensure it has become touch dry. Then work the membrane into the right angle and up the upstand.

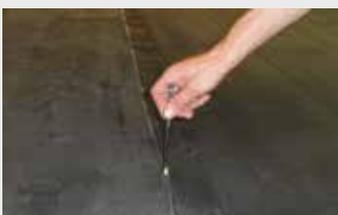


4) Mate the two surfaces together ensuring there is no trapped air. If the membrane and substrate are put together when wet, blistering will occur.

## Seam Detailing

Membrane seams are either joined along the length by Pre-applied Seam Tape, a 75mm PS seam tape bonded to the underside edge of the membrane or by using 150mm PS Cover strip for butt jointing of membranes at end joints or seaming membrane to other materials.

### 3) 75mm Pre-applied Seam Tape (PST)



1) Adhere both sheets fully in position allowing the PST to achieve a 75mm overlap to the next sheet and mark a line down the edge of the tape.



2) Apply DuoPly Primer to the bottom overlap area only and allow the DuoPly Primer to become touch dry. Primer must only be applied to a clean and dry surface.



3) Once the primer has become dry, release 200-300mm of the protective film from the PST and press the top lap into the primed area and continue along the seam.



4) Roll the entire seam with a hand roller, rolling at right angles to the seam not along it to achieve full seam strength and ensuring there are no trapped bubbles.

#### 4) 150mm PS Cover Strip



1) Adhere both sheets in the required position, ensuring there is no gap between the sheets. Then prime a strip 80-90mm either side of the joint.



2) Once the primer has become dry, peel a section of cellophane protective layer and adhere the start of the 150mm tape to the primed area.



3) Continue along the seam removing the cellophane and adhering the tape to the primed area with a flat hand. Ensure there are no trapped bubbles in the seam.



4) Roll the entire seam with a hand roller, rolling at right angles to the seam not along it to achieve full seam strength. 225mm cover patches must be applied at seam junctions.

### Corner Detailing

Corner details, cover patches and other flashings are all installed by using 225mm PS Elastoform tape, NOT 150mm Cover Strip.

#### 5) Internal Corners



1) Adhere the membrane to the upstands (see section 2) and fold the membrane together to form a triangular flap. Fold the flap back to one side and trim any excess membrane away leaving a flap approx. 75mm wide.



2) Cut a section of 225mm PS Elastoform flashing to give 75mm coverage past the edge of flap and large enough to extend up to the top of the corner. Put the tape in position and mark around it.



3) Apply DuoPly Primer to the marked area (inside, outside of the flap and upstand) and allow primer to dry. Once dry remove protective cellophane and adhere tape into position.



4) Roll the internal corner detail with a hand roller to achieve full detail strength.

#### 6) External Corners



1) The membrane should be cut from the base of the corner to the top at a 45° angle. Use a section of PS Elastoform flashing to give 75mm coverage round the corner, 50mm past the top of the cut and up to 75mm onto the flat area. Put the tape in position and mark around it.



2) Apply DuoPly EPDM Primer to just beyond the marked area. Primer should only be applied to dry and clean surfaces. DuoPly Primer is compatible with a range of substrates such as brick, plastic, timber etc.



3) Once dry remove the protective cellophane and adhere tape into position starting from the top of the tape and working down. Roll the tape then repeat the process with a second section of tape from the opposite direction.



4) The finished corner will have 2 sections of tape, of equal size overlapping each other by 75mm past each side of the corner. Roll the entire detail to achieve full strength.

## 7) Pipe Detailing

Pipes are sealed by either preformed pipe seals or 225mm PS Elastoform tape. See full installation guide for 225mm Elastoform pipe detail guide.



1) Cut the membrane so it fits over the pipe or cut the sheet to fit around the pipe and seam the cut sheet together with Cover Strip.



2) Using a preformed PS pipe seal cut the seal at the top to the correct size for the pipe. Always cut above the rib on the pipe seal.



3) Place the pipe seal on the pipe and mark around the base. Apply DuoPly primer to the membrane in the marked area and allow to dry.



4) Remove the cellophane layer and mate the pipe seal onto the membrane. Roll the flat area of the seal to achieve full strength and fit the metal clamping ring to the top of the seal.

## Rainwater Outlet Details

### 8) Anti Back-Up 68mm Outlet

Standard domestic rainwater pipe size for internal outlets through the deck.



1) Cut the head of the outlet back to leave a 50mm flange around the outlet hole and fix into the decking.



2) Cut the membrane around the perimeter of the outlet head, apply DuoPly Primer to the head of the outlet and onto the membrane around the outlet.



3) Allow the primer to dry and adhere a section of 225mm PS Elastoform tape to cover the outlet and seal on to the membrane by at least 50mm.



4) Cut an opening in the centre of the tape, roll the entire flashing with the hand roller and install leaf grate.

### 9) Parapet Wall Outlet

Preformed outlet for going through walls and false pitched roof perimeters.



1) Fix the outlet into the decking and wall. Install the DuoPly membrane over the top of the outlet and then cut the membrane back from the outlet 50-75mm around.



2) Prime the outlet and the membrane around the outlet with DuoPly Primer and allow to dry. Install a section of 225mm PS Elastoform tape to the primed area, cut a small hole in the tape and form it into the opening.



3) Install a strip of PS Elastoform flashing 75mm wide around the inside of the outlet opening to secure the flashing in place.



4) Roll the entire flashing with the hand roller and install leaf grate.

## 10) 110mm Top Drain

For commercial sized outlets for connecting to 110mm rainwater pipes.



1) Fix the outlet into the deck and put the protective yellow cap into position. Install the DuoPly membrane over the top of the outlet.



2) Once the DuoPly membrane has been fitted, find the locating pin on the outlet cap, place the cutting guide over the pin and cut away the circle of membrane.



3) Put a bead of DuoPly Water Cut Off mastic in between the membrane and outlet and securely screw in the clamping ring.



4) Make sure the clamping ring is tight and install the leaf grate into the fixing holes.

## 11) Edge Details

Wall and perimeter details can all be finished with pre-formed details.



### Wall Trim

- 1) Cut a chase into the mortar line a minimum of 150mm above the flat of the roof surface, at least 25mm deep.
- 2) Ensure the membrane is fully bonded up to the chase with DuoPly Bonding adhesive.
- 3) Insert the wall trim into the chase and fix at max of 500mm spacings with DuoPly fasteners.
- 4) Seal the top edge of the trim to the wall with DuoPly Lap Sealant.



### Edge Trim

- 1) Lap the membrane over the roof edge by a minimum of 50mm and place the trim on the roof edge.
- 2) Push the trims down to compress the foam and fix into side of roof with polypins.
- 3) Install corners and joint clips.



### Gutter Trim

- 1) Install the backing plate to the roof edge and ensure membrane overlaps down the front of this by 50mm.
- 2) Position the front cover strip over the rubber and the backing plate. Fix into position with the polypins through the membrane and the backing plate.
- 3) Install corners and joint clips.

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DuoPly EPDM flat roofing system has been awarded the British Board of Agrément certificate, no. 11/4853.

The BBA carries out assessment, testing, approval and certification of products and systems for the construction industry against national requirements, internationally recognised standards or other relevant technical specifications.

The benefits for the distributor are; the distributor is the point of supply for many building products and this carries with it certain responsibilities. Distributors should ensure that the products they supply are fit for purpose and meet regulatory requirements. This is easy to see in Agrément Certificates, perhaps more difficult using alternative methods.

This is especially important for products coming from overseas, that may have been manufactured with another market in mind. For some products with no UK source of production or limited technical back-up, the distributor may struggle to obtain the necessary technical information to overcome a problem on site or with acceptance of the product by UK specifiers, purchasers or building control.

Companies and individuals using products with Agrément Certificates can do so in the knowledge that they will perform, if installed in accordance with the guidance in the Certificate, exactly as set out in the certificate. If work is to be inspected by building control, the NHBC or any other industry professionals, the use of approved products should avoid any problems with compliance with Building Regulation or other issues.

The BBA works closely with regulatory authorities throughout the UK as well as with housing warranty bodies to ensure Agrément Certificates are accepted nationwide.



For more information visit [www.duoply.co.uk](http://www.duoply.co.uk) or contact your local DuoPly distributor:

[www.duoply.co.uk](http://www.duoply.co.uk)