

System 300

NEWTON 303 POLYPROOF

Swelling Waterbar

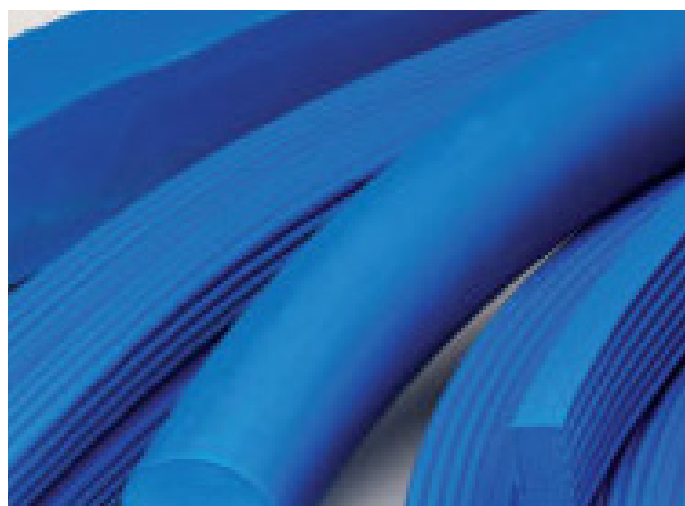
Rev 1.4 - 26 January 2015

PRODUCT CODE - SX306

INTRODUCTION

Newton 303 PolyProof is a hydrophilic, thermo-plastic elastomer waterbar, which swells when activated by moisture. It is characterised by high elasticity and high tensile strength. Newton 303 PolyProof can be used to seal the structure against water leaks to both poured concrete and precast construction joints.

The swelling is achieved through special hydrophilic polymers, which are inseparably linked within the carrier material (TPE). This ensures that high elasticity and exceptional tensile strength results even when fully expanded within the joint.



Due to its high resistance to acids, alkalis and organic solutions, Newton 303 PolyProof can be used to seal joints where aggressive water is expected such as within sewage treatment plants, bio-gas plants and liquid waste holding tanks.

Newton 303 PolyProof is particularly suited to sealing expansion joints, compression joints and settlement joints. Newton 303 PolyProof swells to 400 times its original size when in contact with water, sealing the joint fully and reliably.

TYPICAL APPLICATIONS

- Primary swelling waterbar to seal the joint against leaks through construction joints, movement joints and compression joints to earth retained structures.

The following joints can be waterproofed with Newton 303 PolyProof:

- Raft - Raft
- Raft - Wall
- Wall - Wall
- Slab - Steel Piled Cut off Wall

NEWTON 303 POLYPROOF	
Material	TPE with hydrophilic polymers
Colour	Blue
Profile	Various
Sizes	Various
Swelling capability	Up to 400 times original size
Watertightness	5 bar (50m water column)
Installation Temperature	5C to 40°C
Service Temperature	-30°C to 60°C

KEY BENEFITS

- Very high resistance to water pressure.
- Delayed swelling - will not swell during the installation process or during the concrete cure.
- Swells up to 400 times its original size to quickly seal leaks at joints in the structure.
- Very resistant to the high alkalinity of concrete.
- Maintains very high elasticity and tensile strength, even when swollen.
- Age resistant, no embrittlement.
- Resistant to sewage, chlorine and sulphur.
- Suitable for both 'new to new' joints and 'new to old' joints.
- Retains integrity even through many wet/dry cycles.

SUITABLE SUBSTRATE

Construction joints within retained concrete structures:

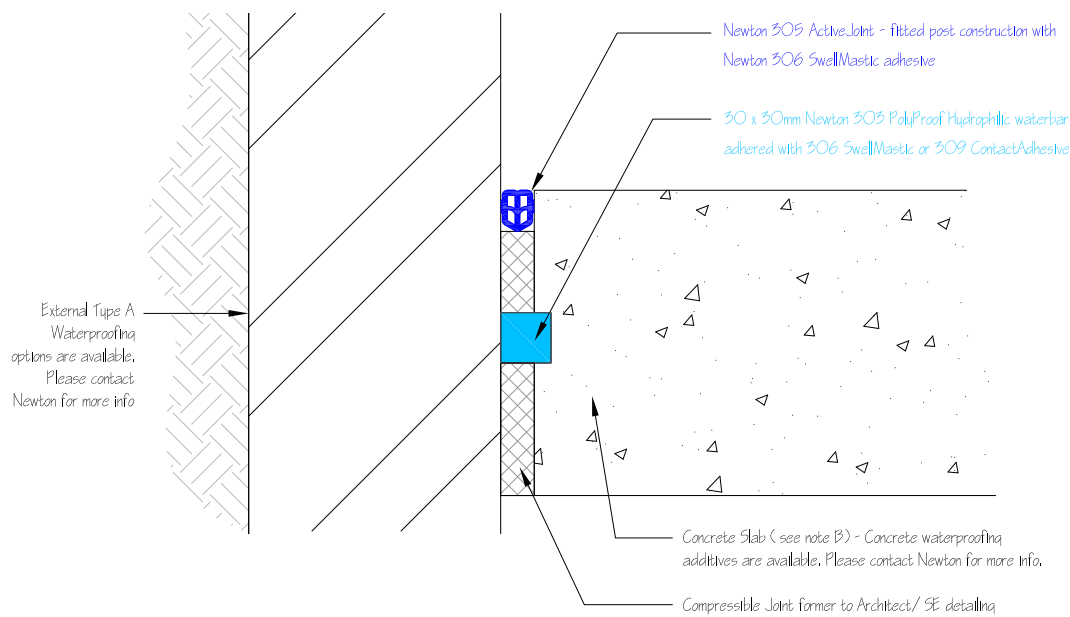
- Static and non-static construction joints.
- Compression joints.
- Settlement joints.
- Movement joints.
- Pipes, service sleeves, concrete rings, preformed sumps or other protrusions through a poured concrete element.



NEWTON 303 POLYPROOF

Swelling Waterbar

TYPICAL DETAIL - SLAB TO WALL MOVEMENT JOINT



PRODUCT SIZES & USES

Newton 303 PolyProof is available in three sizes:

20mm wide x 2mm high

For the sealing of poured concrete to preformed elements such as pipes, conduit sleeves, concrete rings, sump chambers and other protrusions through the structure.

20mm wide x 10mm high

For the sealing of many types of construction joints including at the kicker where no rebate has been formed. Also used for settlement and compression joints of 8mm or less.

30mm wide x 30mm high

For the sealing of the kicker joint where a rebate has been formed. Also used for movement, settlement and compression joints of 28mm or less.

SPECIFICATION

Newton Waterproofing Systems are in partnership with RIBA NBS who publish details of our products and systems within their specification clause library to allow Architects ease of specification through their NBS Plus interface.

NBS clauses can be accessed via the technical resources area of the web site where a live NBS Feed is available at [NBS Plus Live Feed](#)

Our website has drawings available for download here [Technical Drawings](#) and a selection are also available via [FastrackCAD](#)

TRAINING & COMPETENCY OF USER

Newton 303 PolyProof should be used by those with an understanding of the requirement to waterproof retained structures and the knowledge and training to use the product as part of a coordinated approach to the waterproofing of the structure, which in many cases will require further waterproofing products so as to achieve the required habitable grade as defined by BS8102:2009.

TOOLS REQUIRED

No special tools are required. Standard contractor tools are sufficient for the correct installation of the system.

CONSTRUCTION

The construction should conform with current Building Regulations, British Standards and relevant Codes of Practice.

CONSTRUCTION - NEW CONCRETE

New concrete should be designed by a Structural Engineer to EN 1992 (Formally BS8110 & BS8007). Poured concrete rafts, kickers and foundations should have a surface finish to Class of finish U3 as documented in 'General Specification for Civil Engineering Works' section 14: 'Formwork and Finishes to Concrete', namely a "Uniform, dense and smooth surface" with float marks of no more than 3mm.

NEWTON 303 POLYPROOF

Swelling Waterbar

SURFACE PREPARATION

The surface of the concrete should be clean, correctly compacted and uniform. Jet wash the surface to reveal clean aggregate. The surface must be free of ice.

Within construction joints between the raft and the wall, it is recommended that a kicker be formed and that a recess of 30mm wide and 15mm deep be formed into the middle of the top of the kicker.

INSTALLATION - GENERAL

Newton 303 PolyProof is glued to one side of the construction joint prior to the placement of the next concrete element that forms the joint.

A choice of adhesives are available:

Newton 306 SwellMastic

Hydrophilic mastic that swells when in contact with water. Sealing with Newton 306 SwellMastic creates a very secure bond that will fill small undulations within the concrete joint.

Newton 309 ContactAdhesive

Adhesive with very high bond characteristics.

KICKER JOINT WITH RECESS

- Form the kicker, create a recess of 30mm wide and 15mm deep to the centre of the joint.
- Jet wash the top surface of the kicker to reveal the aggregate and allow to dry.
- Apply a 5mm bead of Newton 306 SwellMastic or Newton 309 ContactAdhesive to the bottom of the recess.
- Push/place 30mm x 30mm Newton 303 PolyProof into the recess to the extent of the joint pressing slightly so as to displace the adhesive.
- At changes in direction and at ends of rolls of product, simply butt joint and glue with Newton 309 Contact Adhesive.
- Place the concrete wall elements being careful not to damage the waterbar during compaction vibrating.

INSTALLATION-KICKER JOINT - NO RECESS

- Form the kicker.
- Jet wash the top surface of the kicker to reveal the aggregate and allow to dry.
- Apply a 5mm bead of Newton 306 SwellMastic or Newton 309 ContactAdhesive to the centre of the joint.
- Place 20mm x 10mm Newton 303 PolyProof into the adhesive and slightly press so as to displace the adhesive.

- Where in-line joints are required, place the waterbars next to each other with an overlap of 100mm.
- Place the concrete wall elements being careful not to damage the waterbar during compaction vibrating.

INSTALLATION - CONSTRUCTION JOINT

- Jet wash the face of the concrete element already in place to reveal the aggregate and allow to dry.
- Apply a 5mm bead of Newton 306 SwellMastic or Newton 309 ContactAdhesive to the centre of the joint.
- Place 20mm x 10mm Newton 303 PolyProof into the adhesive and slightly press so as to displace the adhesive.
- At changes in direction simply butt joint and glue with Newton 306 SwellMastic or Newton 309 Contact Adhesive.
- Where in-line joints are required, place the waterbars next to each other with an overlap of 100mm.
- Place the concrete wall elements being careful not to damage the waterbar during compaction vibrating.

INSTALLATION - MOVEMENT, COMPRESSION & SETTLEMENT JOINTS

- Jet wash the face of the concrete element already in place to reveal the aggregate and allow to dry.
- Apply a 5mm bead of Newton 306 SwellMastic or Newton 309 ContactAdhesive to the centre of the joint.
- Place 30mm x 30mm Newton 303 PolyProof into the adhesive and slightly press so as to displace the adhesive.
- At changes in direction simply butt joint and glue with Newton 309 Contact Adhesive.
- Where in-line joints are required, place the waterbars next to each other with an overlap of 100mm.
- Further fix the waterbar with 50mm stainless steel nails at 100mm centres.
- Apply a suitable compressible filler material either side of the Newton 303 PolyProof.
- Pour or place the adjoining elements being careful not to damage the waterbar during compaction and vibration of poured concrete.

INSTALLATION - PROTRUSIONS THROUGH Poured CONCRETE ELEMENTS

- Clean the preformed element and allow to dry
- Apply a 5mm bead of Newton 306 SwellMastic or Newton 309 ContactAdhesive to the preformed element to coincide with the centre of the joint.
- Place 20mm x 2mm Newton 303 PolyProof into the adhesive and slightly press so as to displace the adhesive.
- Wrap Newton 303 PolyProof fully around the element with an overlap of 100mm.

NEWTON 303 POLYPROOF

Swelling Waterbar

- Pour the surrounding concrete being careful not to damage the waterbar during compaction and vibration.

NOTE: Where an opening has been created within an existing concrete element to facilitate the installation of the protrusion, the inner surface of the opening should be treated as a standard construction joint - Please refer to the installation method 'Installation - Construction Joint'.

STORAGE

Store in dry conditions.

PACKAGING

- 20mm x 2mm - Coils of 50m (Can also be purchased by the metre, purchase code: SX303-1C)
- 20mm x 10mm - Coils of 10m
- 30mm x 30mm - Coils of 5m

CONSUMPTION

Newton 306 SwellMastic 290ml Cartridge

- 20mm wide 303 PolyProof - 6 to 8 linear metres.
- 30mm wide 303 PolyProof - 5 linear metres.

Newton 306 SwellMastic 600ml Foil Sausage

- 20mm wide 303 PolyProof - 12 to 16 linear metres.
- 30mm wide 303 PolyProof - 10 linear metres.

Newton 309 Contact Adhesive 290ml Cartridge

- 20mm wide 303 PolyProof - 6 to 8 linear metres.
- 30mm wide 303 PolyProof - 5 linear metres.
- 50mm Stainless Steel Nails

ANCILLARY PRODUCTS

- Injection Ports.
- Hose Joints.
- Hose Clamps.
- Injection Nipples.
- 10 nails per one linear metre of 30mm x 30mm of 303 PolyProof.

HEALTH & SAFETY

Product should only be used as directed. We always recommend that the Material Safety Data Sheet (MSDS) is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The MSDS is available upon request from Newton Waterproofing or online via our web site. Please see contact details below.

ASSOCIATED PRODUCTS

Newton 301 AquaProof - Coated metal waterbar system used for the sealing of construction joints within retained concrete structures. Newton 301 AquaProof features a highly adhesive, reactive polymer coating on one of its sides. The coating creates a permanent watertight seal

with the surrounding concrete to create a waterbar that works immediately.

Newton 305 ActiveJoint - MDPE physical waterbar able to resist high water pressure at active movement joints.

Newton 306 SwellMastic - Hydrophilic mastic used to seal around protrusions through the concrete structure such as pipes and conduits.

Newton 307 PipeSeal - Preformed MDPE seal that creates a physical, flanged joint around pipes passing through the structure. 306 SwellMastic should be used to reinforce the joint.

Newton 308 Stopaq - Hydrophilic polymer used for the sealing of services through the structure even when leaking with considerable water pressure.

NEWTON WATERPROOFING SYSTEMS

Newton System 100 - Cementitious waterproofing and repair products. *Type A - BS8102:2009*

Newton System 200 - Waterproofing of Decks and Flat Roofs.

Newton System 300 - Integral waterproofing of earth retained concrete structures. *Type B - BS8102:2009*

Newton System 400 - External waterproofing of earth retained structures. *Type A - BS8102:2009*

Newton System 500 - Internal cavity drain waterproofing of earth retained structures. *Type C - BS8102:2009*