



The Chemical Company

# MASTERFLEX<sup>®</sup> 610

## Water swelling waterbar for joints

### Description

MASTERFLEX<sup>®</sup> 610 Waterbar is suitable for all construction joints subject to hydrostatic pressure, on one or both sides. MASTERFLEX<sup>®</sup> 610 provide simple but efficient waterproofing of construction joints. Movements in the joint, e.g. by shrinkage or settlement in the substrate, are taken up by the elastic profile of the MASTERFLEX<sup>®</sup> 610 Waterbar. MASTERFLEX<sup>®</sup> 610 has been successfully employed to waterproof joints where an opening of up to 5mm was deliberately created. Water pressure of up to 5 bar was sealed.

MASTERFLEX<sup>®</sup> 610 is a component of the BASF pile-cap waterproofing and watertight jointing systems. Consult your representative for details.

### Material composition

MASTERFLEX<sup>®</sup> 610 is based on a newly developed polymer technology providing flexible polymer composites which have high chemical resistance capable of storing water in their molecular structure by increasing their volume.

Where previously MASTERFLEX<sup>®</sup> 610 was available in different grades for various exposure conditions. A single version of MASTERFLEX<sup>®</sup> 610 now resists deterioration in the following conditions: In fresh water and where the water has a high salt content (sea water, brackish water), in construction with high chemical exposure and/or exposure of solvents, including oils and fuels.

MASTERFLEX<sup>®</sup> 610 Waterbar has been approved for drinking water installations by the 'Hygiene-Institut' Gelsenkirchen (Germany).

### Functional behaviour

When in contact with water the MASTERFLEX<sup>®</sup> 610 Waterbars will slowly increase in volume (swell) without changing the homogeneous structure of the polymer matrix. The increase in volume by the swelling action can be up to 200% (depending on type of water). In very high salt concentration (20%), volume swelling is 20%. The pressure of the swelling action will cause the MASTERFLEX<sup>®</sup> 610 Waterbar to profile itself exactly into the joint filling all cavities and effectively stopping water seepage, even at high external water pressure.

The MASTERFLEX<sup>®</sup> 610 Waterbars will not transport water through their polymer matrix and thus not act as a capillary duct. The swelling action is limited to the sides exposed to water.

### Packaging

20 x 10mm (± 5%) 30 linear metres per carton.

### Installation procedure

#### Preparation:

All joints to be waterproofed with MASTERFLEX<sup>®</sup> 610 Waterbars must first be cleaned. Free standing water and sharp protrusions must be avoided.

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MASTERFLEX<sup>®</sup> 610 Waterbars can be installed on moist or frozen surfaces.

MASTERFLEX<sup>®</sup> 610 Waterbars are resistant to most ordinary mould release agents, but if in doubt the installed waterbar should always be protected from accidental exposure to form release agents

## Placing:

For normal joint widths of 200-400mm, MASTERFLEX<sup>®</sup> 610 is placed in the middle of the joint. For added safety thicker walls can be fitted with 2 waterbars.

MASTERFLEX<sup>®</sup> 610 Waterbars are glued into the joint with a special adhesive for MASTERFLEX<sup>®</sup> 610 Waterbars. On vertical surfaces the MASTERFLEX<sup>®</sup> 610 is temporarily fixed to the construction joint with a nail until the adhesive dries.

Regardless of the method used for holding the MASTERFLEX<sup>®</sup> 610 Waterbar in place, it MUST always be secured so that the waterbar is in close contact with the surface of the substrate as otherwise the full waterproofing effect will not be obtained.

After placing the MASTERFLEX<sup>®</sup> 610 Waterbar the joint area should be kept clean and free of loose dirt and stones before concreting. The minimum concrete cover of MASTERFLEX<sup>®</sup> 610 Waterbar is 80mm.

## Butt joints:

MASTERFLEX<sup>®</sup> 610 Waterbars should never be glued at butt joints, but laid with a 20mm overlap.

## \*Technical properties

Basis:	polymer composite
Resistance to micro-organisms:	resistant
Water pressure resistance:	50m (5 bar)
Water seepage (when placed in expansion joint):	none
Application temperatures:	-30°C to +50°C
Freeze / thaw resistance:	no influence before and after concreting

## Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes mouth, skin and foodstuffs. If accidentally ingested, seek immediate medical attention. Reseal containers after use. For further information, refer to material safety data sheet.

## Storage

Store under cover out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air conditioned environment.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage and disposal instructions refer to the Material Safety Data Sheet.



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## Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF representative.

BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

## Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

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\* Properties listed are based on laboratory controlled tests.

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**As all BASF technical datasheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue.**

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