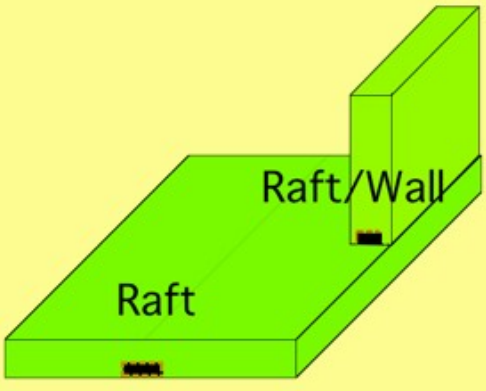
mastix sa

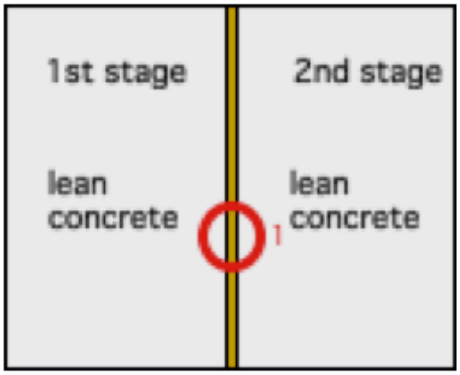
Procedure for

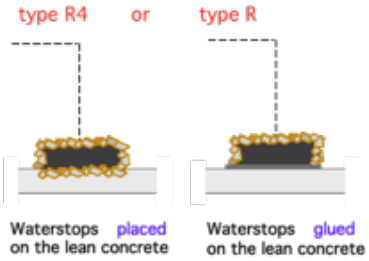
waterproofing joints with BFL-Mastix waterstops between two concreting stages of a raft and the work joint between raft and walls



1 Placing of BFL-Mastix waterstops

BFL-Mastix waterstops are to be placed in the centerline
of the concreting workjoint.





Please consult the BFL-Mastix catalogue,
www.mastix.ch
Bands type R4 : page 14
Placing of BFL-Mastix type R4 : page 76
Bands type R : page 22
Gluing of BFL-Mastix type R : page 78

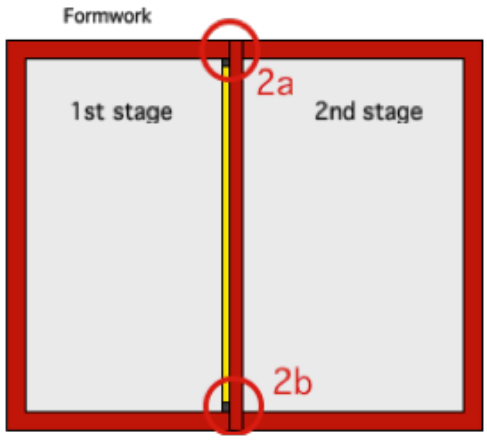
BFL-Mastix waterstops show a mineral surface, rough and porous and allow a perfect adhesion for a waterproof liaison with concrete.
The fine crushed gravel, covering the BFL-Mastix water stops, has the following properties
- grain size 4/8 mm
- specially chosen limestone, non alkali-reactive.

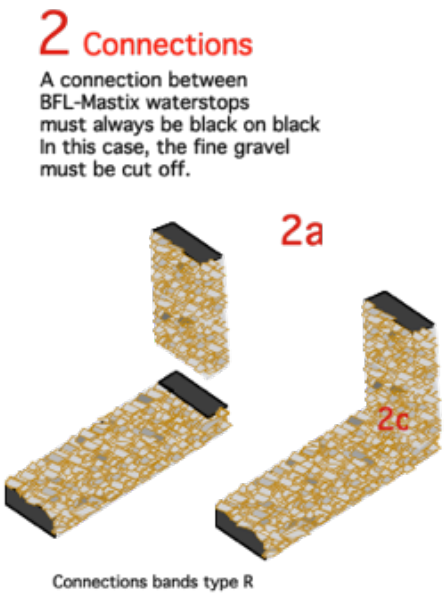
2 Connections

Horizontal BFL-Mastix waterstops are connected with vertical ones.

A connection between BFL-Mastix waterstops must always be black on black.

In this case, the fine gravel must be cut off.



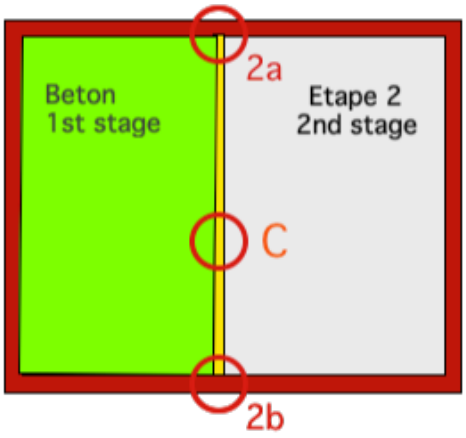


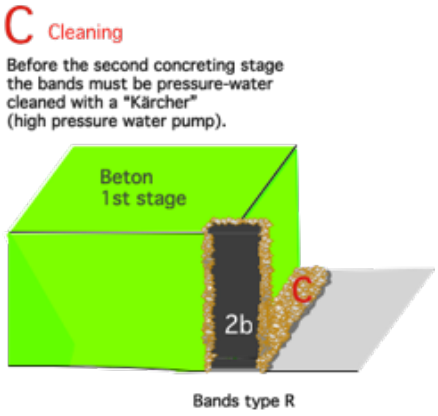
Please consult the BFL-Mastix catalogue,
www.mastix.ch
Connections : page : 80

Thanks to the particular conception of the BFL-Mastix waterstops,
water cannot penetrate anymore in the joints.

3 Cleaning

The horizontal and vertical BFL-Mastix waterstops must be cleaned after the formwork stripping of the first concreting stage.





Please consult the BFL-Mastix catalogue,

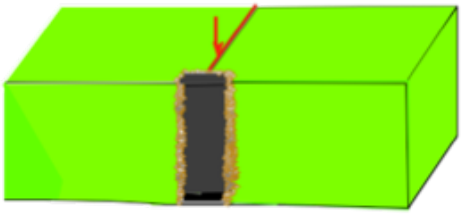
www.mastix.ch

Cleaning : page : 77

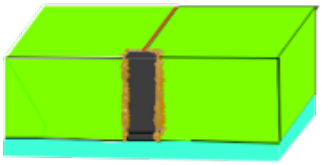
Water infiltration in concrete structures is the origin of multiple and important long term damage.
It is the non-dominated way that water finds to initiate and develop these damages.
This way will water always find in structural weak points.
Weak points are mostly formed in interfaces concrete/concrete and concrete/other materials.

4 Fissure treatment in a work joint

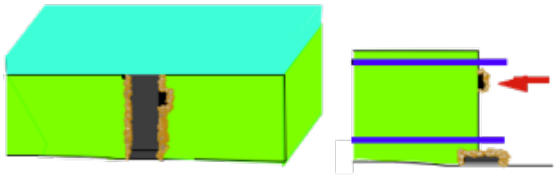
Fissure in a concreting work joint

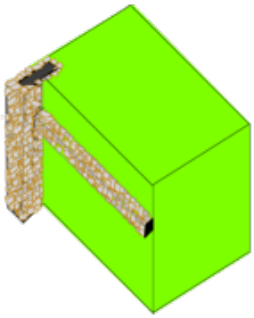


Water penetrates
only under the raft
It is not necessary
to treat the fissure



For a basin, a reservoir, a pool:
Gluing of a band 15/30 R or 20/40 R
over the fissure, to re-assure
the watertightness over the fissure .





Connection of bands type R

Please consult the BFL-Mastix catalogue,

www.mastix.ch

Bands type R : pages : 20 - 21 - 78

Water penetrates in the concrete structure through fissures and joints.
Water finds always the easiest way to penetrate into a structure.

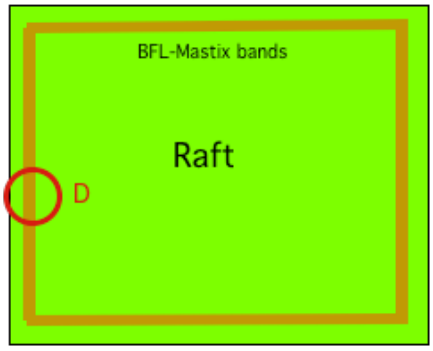
The easiest penetration is in weak points, openings and joints. These cannot be avoided, but are often badly carried out and not very durable.
Certain waterproofing systems and materials are simply unfit.

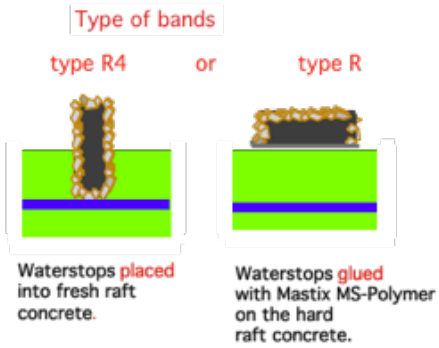
5 Watertightness raft/walls

Work joint between raft and walls.

It concerns a separation joint between two concrete connections or the separation interface between a hard and a fresh concrete.

Two types of waterstops are used : Bands type R4 and R



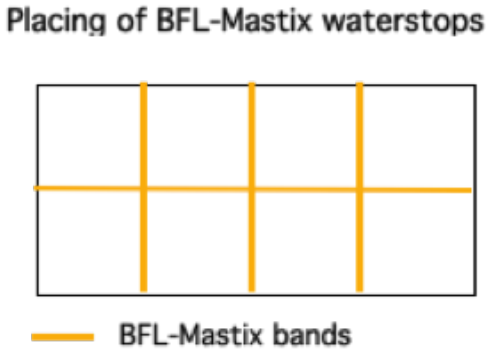


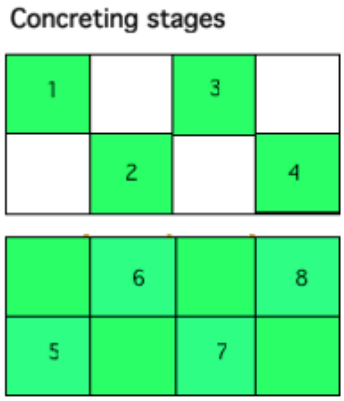
Please consult the BFL-Mastix catalogue,
www.mastix.ch
Bands type R4 : page 15
Placing of BFL-Mastix type R4 : page 76
Bands type R : page 23
Placing of BFL-Mastix type R : page 78

Simple rules to obtain a durable waterproofness between raft and walls :
- The surface of the work joint must be porous and rough to increase the surface of adhesion with the concrete.
- The surface of the work joint must be porous and rough, to eliminate defective materials.
– The connection between waterstop bands can easily be made with a small propane gas burner. See also videos in www.mastix.ch

6 Raft with several concreting stages

The BFL-Mastix waterstops are placed in the centerline
of the work joint.





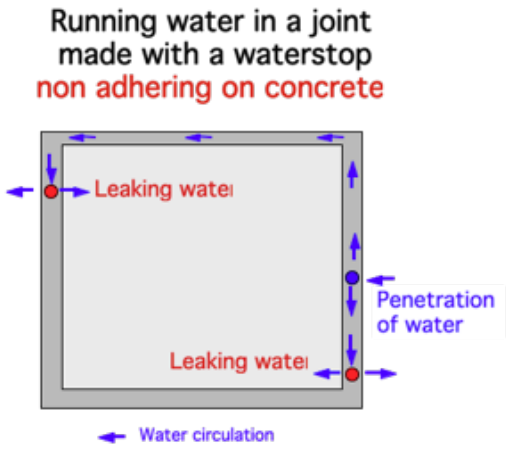
Please consult the BFL-Mastix catalogue,
www.mastix.ch
Bands type R4 : page 14
Placing of BFL-Mastix type R4 : page 76
Bands type R : page 22
Placing of BFL-Mastix type R : page 78

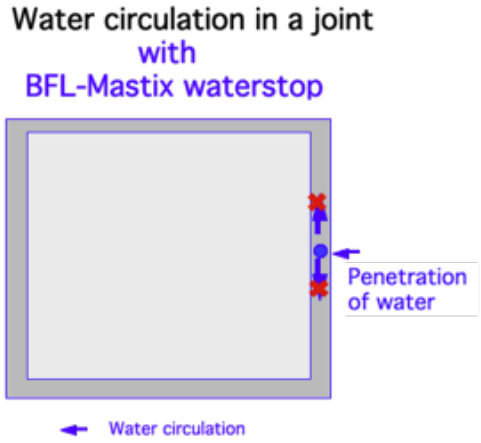
BFL-Mastix waterstops conserve their entire capacity, as long as the concrete element exists. Only when this element will be decomposed, then the BFL-Mastix waterstops would separate from the concrete.
To obtain a guarantee of the watertightness with BFL-Mastix waterstops, it is sufficient to control the placing of the bands, which assures the longterm durability.

It is important to understand, that the watertightness of a concrete is not identical with that of a construction element.
For the watertightness of a concrete construction, the watertightness of the joints is decisive.

The choice of the correct BFL-Mastix waterstop depends more on practical points of view, than on considerations on durability assurance over the years.

7 The ways of the water





Water penetrates into a concrete structure through fissures and joints.
Water will always find the easiest way to circulate.
The easiest way for water circulation are weak points in the concrete, openings and joints, which are indispensable, but often badly carried out or made with unfit systems or materials.

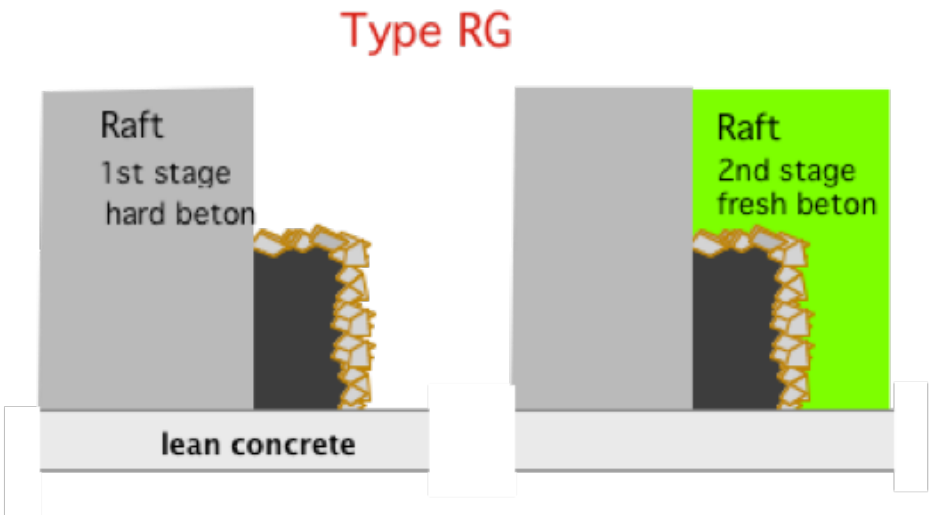
Thanks to the BFL-Mastix waterstops, the water floating is dominated and it is possible to neutralize formation of ARG (alkali- reaction-granulate), formed under certain conditions through water infiltrations in the structure.

BFL-Mastix waterstops are successfully used to repair structures with ARG damage and to avoid water flowing in joints of new structures.

The Mastix technology offers a solution to avoid water flowing through joints, thanks to the durable liaison of the fine gravel with the adjacent concrete.

8 Variant with BFL-Mastix waterstops type RG

BFL-Mastix waterstops type RG are glued on the lean concrete and on the hard concrete of the first raft concreting stage.



BFL-Mastix waterstops type RG are glued on the lean concrete and on the hard concrete of the first raft concreting stage.

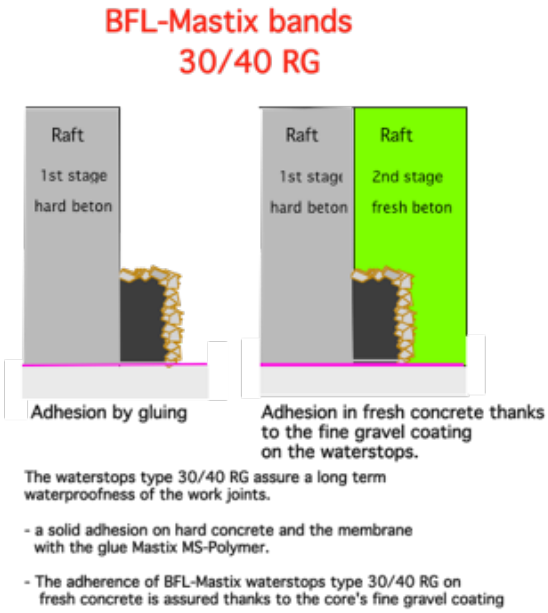
Please consult the BFL-Mastix catalogue,
www.mastix.ch
Bands type RG : page 46
Placing of BFL-Mastix type RG: page 78

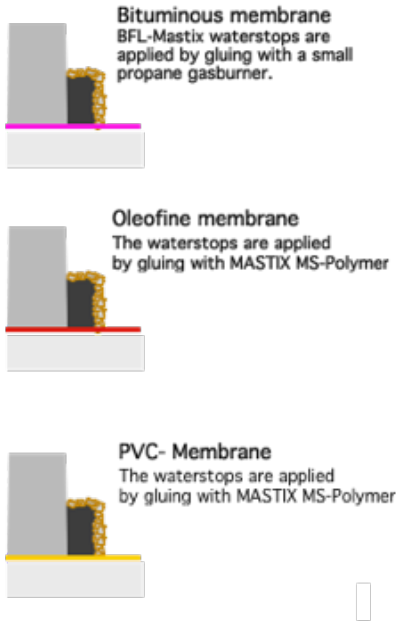
Concrete adheres exclusively on porous materials, absorbing water and in this way the fresh concrete.

In the case, that fresh concrete meets nonabsorbing materials, such as glass, steel, synthetics or plastic, a watertightness in a joint is not feasible.

9 Waterproofing membranes

If waterproofing membranes are glued on lean concrete, it is indicated to use BFL-Mastix waterstops type 30/40 RG, in order to obtain a maximum security of waterproofing the work joints.





Please consult the BFL-Mastix catalogue,
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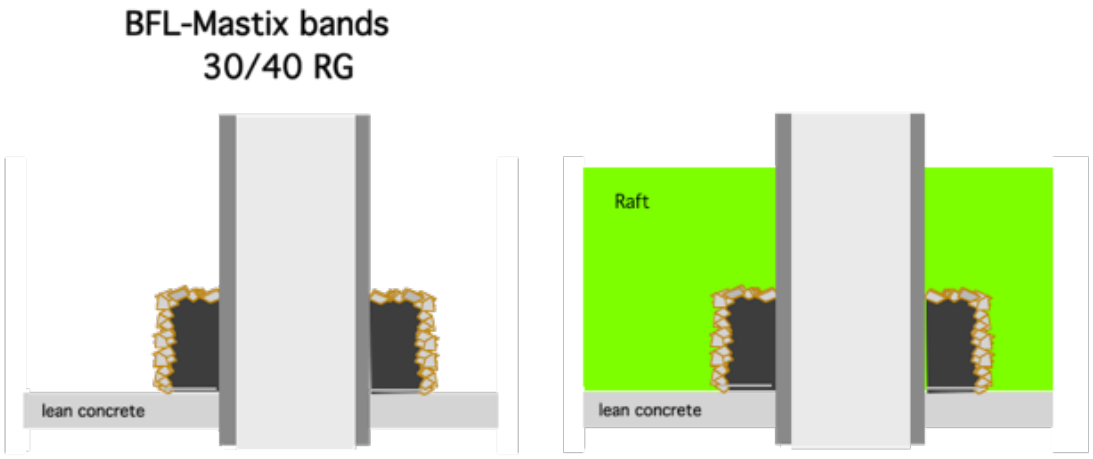
Bands type RG : page 46
Placing of BFL-Mastix type RG: page 78

BFL-Mastix waterstops confined in concrete,
assure a perfect and durable
waterproofness in the joints.

10 Waterproofing of a pipe crossing in concrete piles, in a raft.



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Bands type RG : page 46
Placing of BFL-Mastix type RG: page 78

BFL-Mastix waterstops resist rain (they do not swell in contact with water), snow and frost. They can remain several weeks in a waiting position on a jobsite.

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