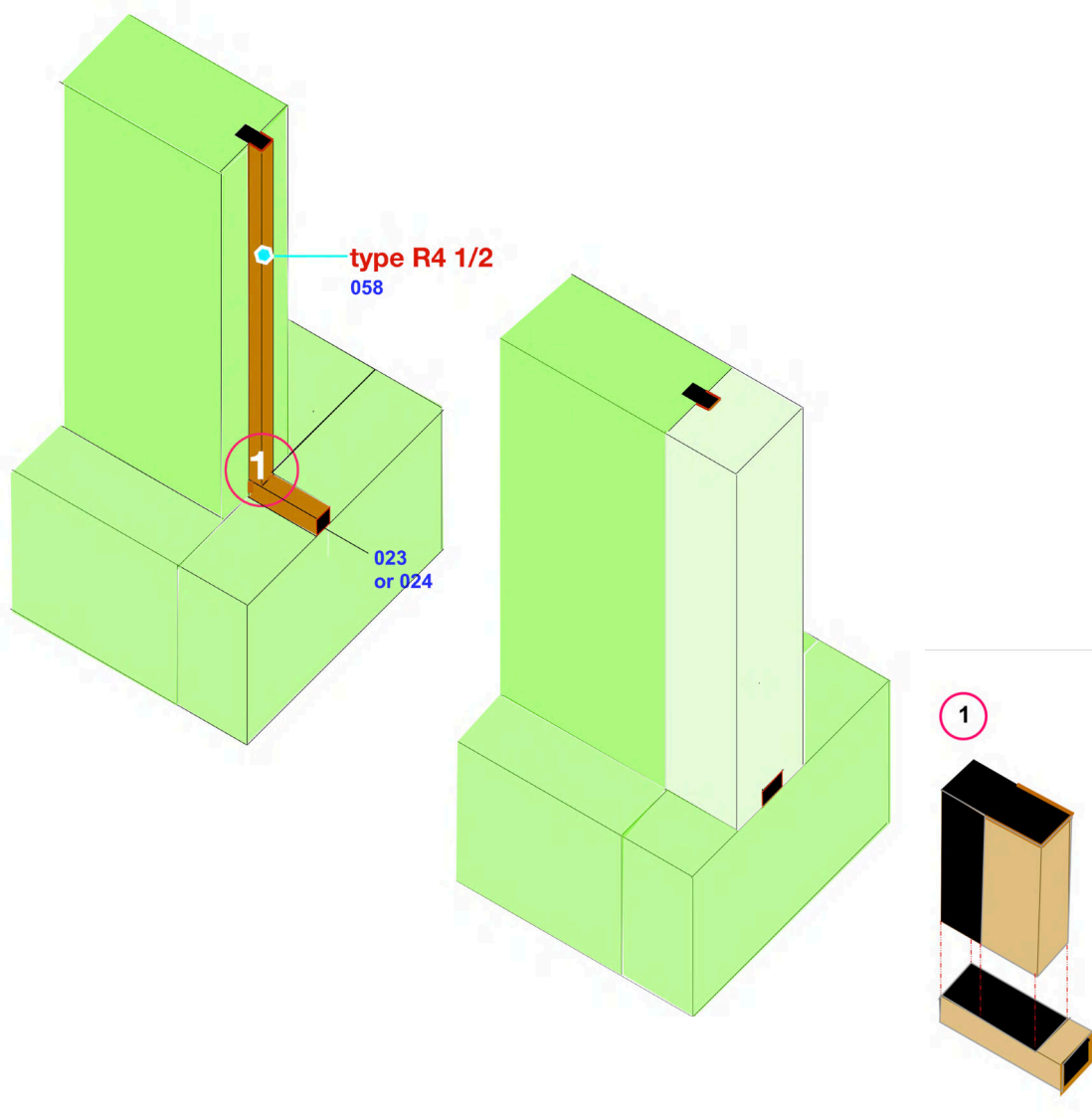


Mastix system : technical file
Waterproofing of retreat joints
Wall/Wall - Raft foundation/Walls
Variant with bands type R4 1/2

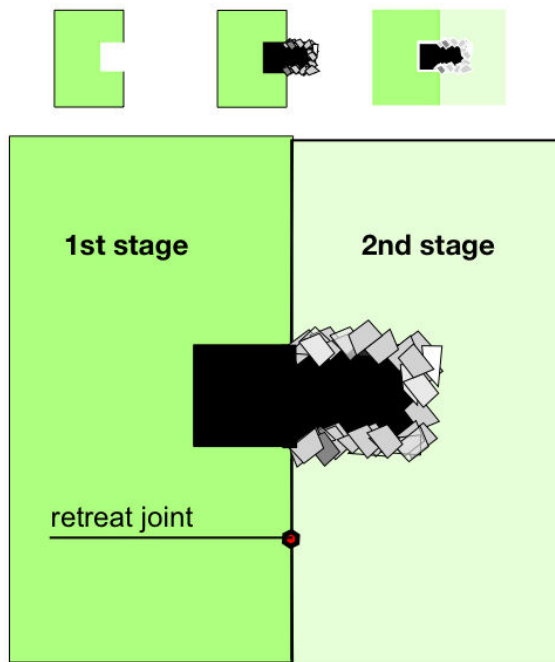
B23

Variant with bands type R4 1/2
Specifications sheet 058 - 023 - 024
Specifications sheet 301 Waterproofing principle of the Mastix waterstop system



The Mastix system is simple to work with and naturally compatible
with concrete and concrete structures.

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BFL-Mastix type R4 1/2 placed in a notch

Retreat or control joint

Formed through retreat of the new concrete during its hardening period and non existing connection reinforcement.

Choosing a profile type R4 1/2

Consult the Mastix catalogue over www.mastix.ch pages 40 and 41

Gluing of waterstops type R4 1/2

1.- Waterstops type R4 1/2 are to be glued in the notch with Mastix MS-Polymer

Consult the Mastix catalogue over www.mastix.ch pages 74 -78 - 79 - 80

1. Description of waterstop type R4 1/2

BFL-Mastix waterstops type R4 1/2 D are composed of a partly gravel covered core.

The core consists of a soft and waterproof rubber/bitumen elastomer material.

The fine gravel coating, covering the profile R4 1/2, is a rough and porous non alkali-reactive material of grain size 4/8 mm.

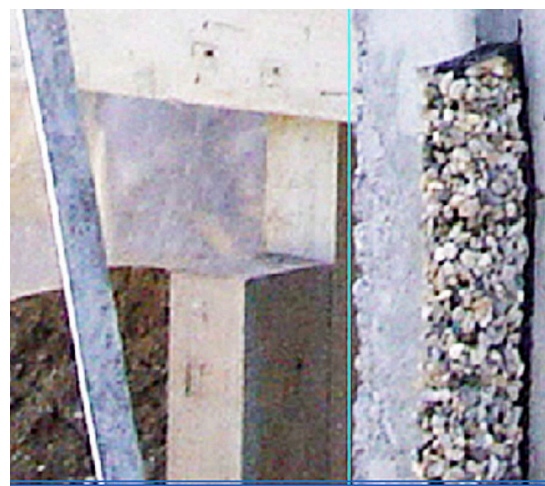
The fine gravel is mechanically tightly anchored on the core material.

Waterstops BFL-Mastix type R4 1/2 shall not be used for expansion joints.

Waterstops BFL-Mastix type R4 1/2 shall not be used in the presence of water pressure

2. The deformable reserve

The deformable reserve is a part of the core volume, allowing to absorb movements through retreat and settlement.



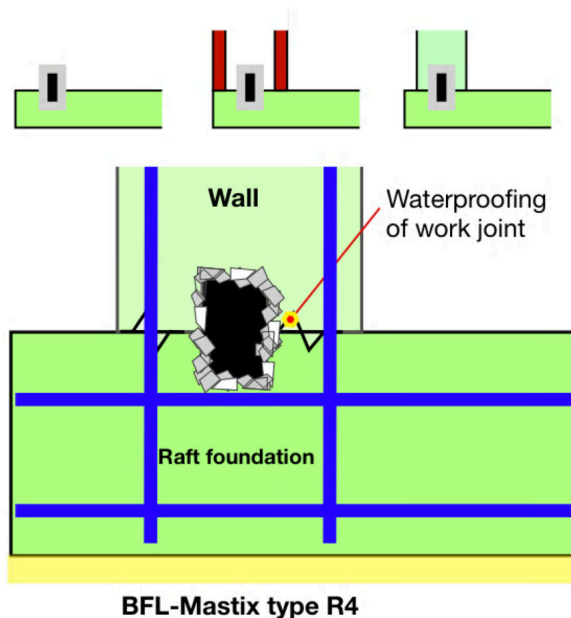
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Waterproofing of work joints

Raft foundation/Walls

Waterstops BFL-Mastix type R4 to be placed into the raft concrete



Work or construction joint

Interface between two concreting stages where water could penetrate.

Choosing a profile type R4

Consult the Mastix catalogue over www.mastix.ch page 15

Placing of waterstops type R4

- 1.- Preparation
- 2.- Bands incorporation in fresh raft concrete
- 3.- Control of placed bands

Consult the Mastix catalogue over www.mastix.ch pages 76 - 77- 80

1. Description of waterstop type R4

BFL-Mastix waterstops type R4 are composed of a totally gravel covered core. The core consists of a soft and waterproof rubber/bitumen elastomer material.

The fine gravel coating, covering the profile R4, is a rough and porous non alkali-reactive material of grain size 4/8 mm.

The fine gravel is mechanically tightly anchored on the core material.

2. Liaison with fresh concrete

Waterproofing a work joint cannot be done, if the fresh concrete gets in contact with a non-absorbing material, such as glass, steel or synthetics.

Fresh concrete adheres exclusively on absorbing and porous materials, such as the BFL-Mastix waterstops type R4.

3. Water penetration

The adhesion of the bands on fresh concrete avoids any possible water penetration around the bands or alongside in the work joint.

Water penetration in work joints leads to damage or, on long term in some cases to a total structural damage.

4. Bad weather on the job site

BFL-Mastix waterstops type R4 placed in fresh concrete, do not suffer under rain, snow or frost.

5. Durability

Only when the structure is demolished, then the BFL-Mastix waterstops will be detached from the concrete.

It is possible to consider the BFL-Mastix waterstops as a constructive element of the concrete structure.

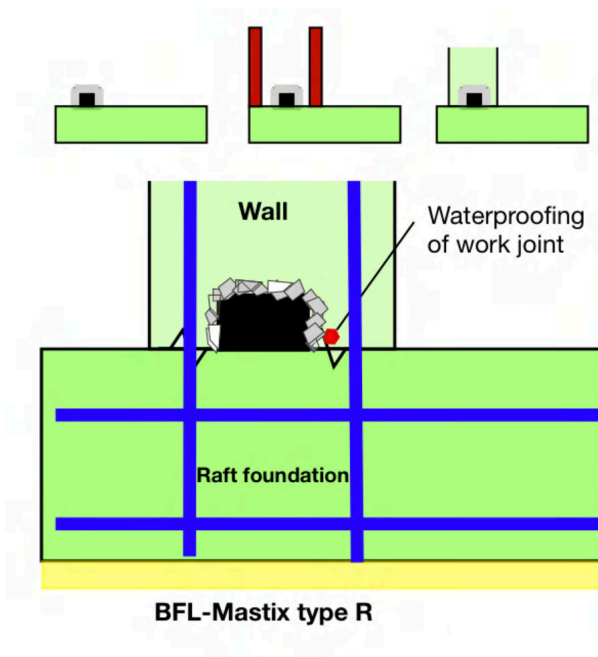
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Waterproofing of work joints

Raft foundation/Walls

Waterstops BFL-Mastix type R to be glued on the hard raft concrete



Work or construction joint

Interface between two concreting stages where water could penetrate.

Choosing a profile type R

Consult the Mastix catalogue over www.mastix.ch page 23

Gluing of waterstops type R

- 1.- Preparation
- 2.- Gluing with Mastix MS-Polymer on raft concrete
- 3.- Control of the glued waterstops

Consult the Mastix catalogue over www.mastix.ch pages 74 -78 -79 - 80

1. Description of waterstop type R

BFL-Mastix waterstops type R are composed of a partly gravel covered core.

The core consists of a soft and waterproof rubber/bitumen elastomer material.

The fine gravel coating, covering the profile R, is a rough and porous non alkali-reactive material of grain size 4/8 mm.

The fine gravel is mechanically tightly anchored on the core material.

2. Liaison with fresh concrete

Waterproofing a work joint cannot be done, if the fresh concrete gets in contact with a non-absorbing material, such as glass, steel or synthetics.

Fresh concrete adheres exclusively on absorbing and porous materials, such as the BFL-Mastix waterstops type R.

3. Water penetration

The adhesion of the bands on fresh concrete avoids any possible water penetration around the bands or alongside in the work joint.

Water penetration in work joints leads to damage or, on long term in some cases to a total structural damage.

4. Bad weather on the job site

BFL-Mastix waterstops type R placed in fresh concrete, do not suffer under rain, snow or frost.

5. Durability

Only when the structure is demolished, then the BFL-Mastix waterstops will be detached from the concrete.

It is possible to consider the BFL-Mastix waterstops as a constructive element of the concrete structure.

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Waterproofing

Waterproofing of joints

Waterproofing principle of the Mastix waterstop system

Introduction

Waterproofing is an entity of applied measures to assure, that water and humidity cannot constructively endanger important building elements.

Penetration of water through joints can sooner or later, in the presence of the AAR phenomenon (alkali-aggregate reaction), lead to a destruction of the structure.

Waterproofing principle of the Mastix waterstop system

BFL-Mastix waterstops are linked to the

" Coherence principle "

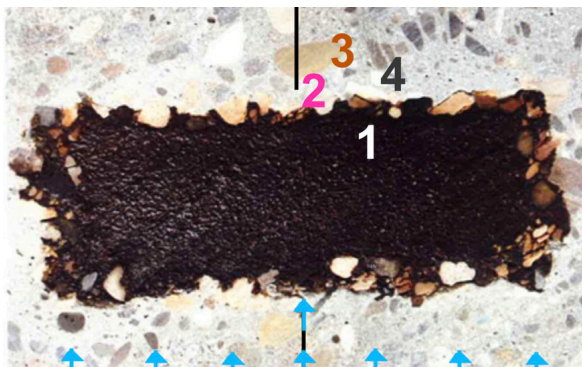
The “**Coherence principle**” in a waterproofing system of joints in concrete structures concerns soft and deformable fine gravel covered waterstops.

This fine crushed gravel must be porous and rough.

The fine crushed gravel is in direct contact with the cement paste of the concrete. It participates in the concrete as well as its own gravel.

The liaison ordinary gravel/cement paste/fine crushed gravel is therefore “**coherent**”. *It combines materials of the same kind and properties.*

The liaison fine crushed gravel/soft and deformable band core is “**coherent**”. The mechanically applied fine crushed gravel is an *interface between band core and the concrete.*



1 Core of BFL-Mastix waterstops

2 Fine crushed gravel on BFL-Mastix waterstops

3 Concrete granulate

4 Cement paste

The Mastix system

The Mastix system comprises the totality of the BFL-Mastix waterstops with their core of a bitumen/rubber mixture, covering partly or totally the core, mechanically coated with fine crushed rough and porous gravel, size 4/8 mm.

Consult the Mastix system over www.mastix.ch

The catalog

The catalog of the BFL-Mastix system can be consulted on the web site www.mastix.ch

Technical documentation

The complete “Technical documentation of BFL-Mastix waterstops” can be consulted in www.mastix.ch

**The Mastix system is simple to work with and naturally compatible
with concrete and concrete structures**

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