De : BFL-MASTIX <mastix@mastix.ch>
Objet : Technical data of BFL-Mastix waterstops

mastix sa

Certified ISO 9001/2015

40 years positive experience with

BFL-Mastix waterstops

in the field of waterproofing construction joints

in tunnels, power dams and buildings

in water reservoirs and pools.

Technical data of BFL-Mastix waterstops

The core

Properties of the core

The core looks like an elastic black material.
The caoutchouc/bitumen core is chemically neutral and insensitive to the concrete alcalinity.

Apparent density : 1,28 gm/cm3

The reaction of the core is analog a liquid of very high viscosity.

The core has an excellent resistance,against snowmelting salt charged water, against liquid manure, against sulfated water, against chlorinated water, against ammonium sulfated water of 10 g/liter, against ammonium chlorid water of 10 g/liter, against sulfuric acid of 50 %, against pure acid oleine, against ethilic alcool.

Core viscosity

The core viscosity of the BFL-Mastix waterstops varies according the temperature during the gluing period.

The viscosity module is lower in summer than in winter.

To avoid flowing of vertically glued waterstops, they should be proped or pneumatically nailed.

Watertightness of the core

The watertightness of the core is total.

Water cannot penetrate the core of the BFL-Mastix waterstops.

For avoiding, that water could flow around the core or along the band, this is coated with a fine chalky gravel layer.

Waterproofing of construction joints is made with BFL-Mastix waterstops, which are coated by a fine chalky gravel layer.

Elasticity of the core

In the presence of pressure, the core of BFL-Mastix waterstops reacts with an elastic deformation.

This deformation capacity is due to the caoutchouc part in the core material.

The limit of the elasticity in the core material is around 45°Celsius. Above this temperature, the core deformation remains permanent.

When a BFL-Mastix waterstop shall be glued on a rough surface, the elasticity of the core must be suppressed, that the band can adhere on the relief of the gluing surface.
Here it is sufficient to slightly heat the gravel-free band side with a propane gas burner.

In the case of joining precast concrete elements, the elasticity of the core will be eliminated by pressure of the elements.

Gluing waterstops on rock
Before placing the bands on the rock surface, they shall be slightly heated with a propane gas burner, then the adherence will be perfect.

Gluing the waterstops on concrete
To obtain a perfect adherence of the bands on very rough concrete, the elasticity of the band core can be avoided by slightly heating the gluing surface on the concrete with a propane gas burner.

Joining precast éléments
The elasticity of the BfL-Mastix waterstops will be suppressed by the pressure between the éléments.

The fine crushed gravel

The fine gravel, coating the BFL-Mastix waterstops, has the task of a liaison agent between band core and fresh concrete.

The fine gravel is also a constitutive part of the fresh concrete and therefore compatible with fresh concrete.

Fresh concrete connects only with porous materials.

Fresh concrete does not connect with steel, aluminium, pre-treated wood formwork, with PVC, glass and synthetic materials.

Properties of the fine chalky gravel

The fine gravel of a grain size 4/8 mm, covering the core of the BFL-Mastix waterstops is from chalky rock.

The fine gravel is from chalky rocks, is rough and improves its adherence on the band core as well as the liaison quality with fresh concrete,

The fine gravel is porous, improving the penetration by cement paste, as well as the quality of BFL-Mastix waterproofing system of the joint.

Adhesion of the gravel coating

The gravel coating on the BFL-Mastix band cores is made mechanically in order to avoid raising capillarity in the interface gravel/band core.

Adherence on fresh concrete

The gravel coated BFL-Mastix waterstops have an excellent adherence on fresh concrete.

The physical-chemical adherence of the BFL-Mastix waterstops between cement paste and the gravel coating is favoured by the porosity and cleanliness of the gravel, so assuring a perfect watertightness.

The chalky gravel is not alkali-reactive.

The Mastix system is coherent,

because it combines

the fine gravel on the bands

with the gravel in the concrete.

These are materials of the same kind

mastix sa