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## TEKNISKT DATABLAD

### Celsa CEMflex

#### PRODUCT DESCRIPTION

Steel Plate Waterstop BPA-CEMflex® VB consists of a galvanised steel plate (stainless steel on special request only) encapsulated in a special patented active coating which reacts with water and moisture when embedded in concrete to provide a watertight construction joint.

The steel plate creates a physical barrier whilst the BPA-CEMflex® active coating reacts with the alkalinity of any water in the concrete to form Calcium Hydroxide (Free Lime) which supports the natural self-healing (sintering) process of the concrete to seal cracks and eliminate water ingress. Only 3 cm of concrete cover on both sides are necessary to seal cold joints up to 8 bar (80 m water pressure).



The connection of the special coating to the concrete prevents any water-flow through the concrete construction joint.

#### APPLICATION AREAS

Steel Plate Waterstop BPA-CEMflex® VB functions as both an active and passive barrier to the transmission of water through all non-movement construction joints (both horizontal and vertical) in in-situ reinforced concrete. It can be used in pressurized and non-pressurized water. As BPA-CEMflex® VB is only activated by the alkalinity of fresh concrete it may be installed in all weather conditions.

Areas of application:

- ⊗ Construction joints in wall/floor areas in contact with pressurized and non-pressurized water
- ⊗ Wall/wall and floor/floor construction joints
- ⊗ or wall/ceiling areas
- ⊗ Joints between prefabricated components: wall/floor, corner joints, and predetermined breaking points

Once installed, the patented coating on BPA-CEMflex® VB Plate Waterstop has infinite sealing ability. Should water or moisture come into contact with the coating at any time in the future, the coating will re-activate and repeat the sealing process. In doing so, the crystallisation and fusion processes penetrate even deeper into the structure of the concrete. Unlike conventional crystallisation waterproofing the CEMflex® active process is a form of crystallisation that does not create any salts which could potentially have an adverse effect on the reinforcing steel which supports the concrete structure.



## ADDITIONAL INFORMATION

### Application Instructions

BPA-CEMflex VB Plate Waterstop can be installed in one of two simple methods: either by fixing it to the steel reinforcement pre-pour using CEMflex Omega Holders or alternatively by pushing the plate into the first pour of concrete to a depth of at least 30 mm, allowing the remainder of the plate to be covered by the next pour of concrete. To connect elements simply overlap the plates by 5 cm and secure with a CEMflex Clip. BPA-CEMflex VB Plate Waterstop can be installed both horizontally and vertically and is easily connected to PVC Waterstops in movement joints to form a continuous watertight joint system.

The elements are strong yet malleable so angles/corners can be formed by hand without damage to the patented CEMflex coating.

### Preparation and General Advice

Surrounding air temperature:

- ☞ minimum - 5 °C
- ☞ maximum + 45 °C

The above mentioned temperatures constitute the generally valid area in which no additional measures need to be taken during application.

### Environmental Advice

This product does not represent a hazardous substance within the meaning of the EU Hazardous Substances Regulation. A safety data sheet for transport, placing on the market and use is available on the request. In accordance with DVGW Code of Practice W 347, BPA-CEMflex VB is approved for use in drinking water tanks and therefore complies with the WHG requirements for drinking water protection.

## CHARACTERISTICS AND ADVANTAGES

- ☞ CEMflex VB Active Waterstop has been designed to provide the highest level of efficacy of any joint waterstop available whilst also being the simplest to fit
- ☞ Steel plate waterstop encapsulated in a 0,5mm thick special patented active coating on both sides with crystallization properties, which seals cracks in the concrete
- ☞ Independently tested for use up to 8 bar water pressure
- ☞ Excellent bond with the concrete
- ☞ Suitable for both vertical and horizontal applications
- ☞ Can be used in conjunction with other waterstop systems: PVC waterstops for movement joints, injectable hose systems or hydrophillic waterstops
- ☞ Life expectancy of 100 years
- ☞ In the event of water ingress the patented coating will reactivate at any time throughout the lifetime of the element
- ☞ Studies show up to 80% installation labour saving over traditional waterstops
- ☞ Simple design dramatically reduces the potential for poor installation or expensive remedial works
- ☞ Fully Weatherproof System- no premature activation of the coating on contact with rainwater
- ☞ Can be installed both pre and post pour
- ☞ No collapse or displacement of the waterstop when subjected to the weight of concrete poured from above
- ☞ No special installation tools required
- ☞ No sticky protection tape to be removed and disposed of from CEMflex VB Plate Waterstop prior to use
- ☞ Bonding the overlappings is not required (The overlapping has to be at least 5cm)
- ☞ No welding required