



CEMflex VB - steel plate waterstop

On both sides special coated steel plate waterstop

With General Building Code Test Certificate (abP)

CEMflex VB - steel plate waterstop

The **CEMflex VB** elements are provided with a special patented coating on both sides. The connection of the special coating to the concrete prevents any water-flow through the concrete construction joint.

Besides the extremely good connection of the special coated steel plate to the surrounding concrete there are some other chemical reactions such as light swelling, crystallization, self-healing of concrete cracks and a natural sintering / crystallization (natural formation of limestone) of concrete cracks.

Only 3cm of concrete cover on both sides are necessary to seal the cold joint up to 5 bar (50 m water-pressure)

The elements are 2000mm long, 150mm high and about 1,25mm thick. The special coating is not sticky and therefore no protection foil is necessary, which has to be removed before concrete work starts.

Areas of application CEMflex VB

CEMflex VB can be used in all construction joints, horizontally or vertically, up to a maximum water-pressure of 50 meter.

Areas of application:

- Horizontal + vertical sealing of any concrete construction joints!
- Waterproof cold joints in foundation-, basement-, civil engineering work as well as in tunnel constructions, underground constructions and special-purpose solutions.

CEMflex VB Product characteristics

Galvanized steel metal plate (b = 0,75 mm / l = 2.000 mm / h = 150 mm) provided on both sides with a 0,5 mm thick special coating which sticks to the concrete chemically and seals permanently the joint which has to be sealed.

CEMflex VB is an active steel plate waterstop! The sealing function is based on the active crystallization process as well as the supported natural sintering process of concrete.

Characteristics CEMflex VB

The extreme good connection behavior to the concrete is responsible for the very good waterproofing property. CEMflex VB supports the natural sintering / crystallization of the cold joint as well as the cracks.

Installation of CEMflex VB

CEMflex VB with coating on both sides has to be installed directly on top of the reinforcement. CEMflex VB has to be fixed by using the special omega steel plate holder.

The overlapping has to be at least 5 cm.

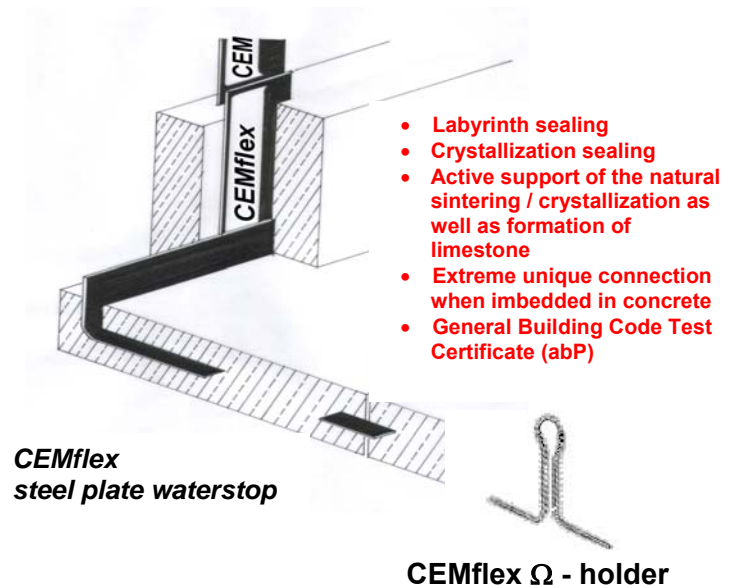
Form of delivery

The single element is 2.000mm long, 150mm high and 1,25 mm thick. In wooden boxes of 50 pieces = 100m

Storage

CEMflex VB can be stored in dry and cold conditions.

Installation example



CEMflex VB

CEMflex VB Steel plate reacts because of its different encapsulated components in the patented coating in combination (direct contact to concrete) with the components of the surrounded concrete.

Besides the extremely good connection of the special coated steel plate to the surrounding concrete there are some chemical reactions starting such as light swelling, crystallization, self-healing of concrete cracks and a natural sintering / crystallization (natural formation of limestone) of concrete joints as well as cracks.

Without any wetness, water or water based liquids the components of the special coating can not be active. If the coating of the steel plate is getting wet, the chemical reaction of the components will start automatically; this natural crystallisation process is an active self healing process!

► **CEMflex VB is an „active“, water reacting, patented steel plate waterstop!**

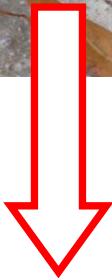
This active self sealing process starts automatically by water contact. The function of this sealing process is secured even after decades of installation.

By the use of CEMflex VB there will always be an automatically (active) waterproofing reaction / process. The crystallization, self-healing of concrete cracks will penetrate deeper and deeper in the concrete structure.

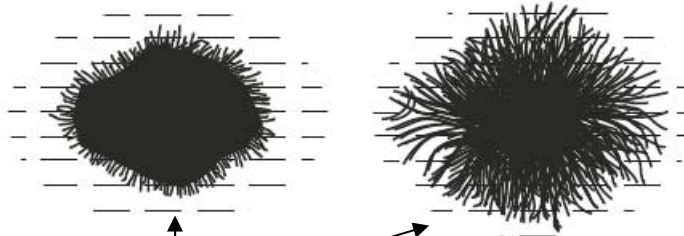
The waterproofing reaction of CEMflex VB steel plate waterstop has been tested on the independent / public Institution of the University of Stuttgart (MPA Stuttgart) and is confirmed with a abP (**General Building Code Test Certificate**)



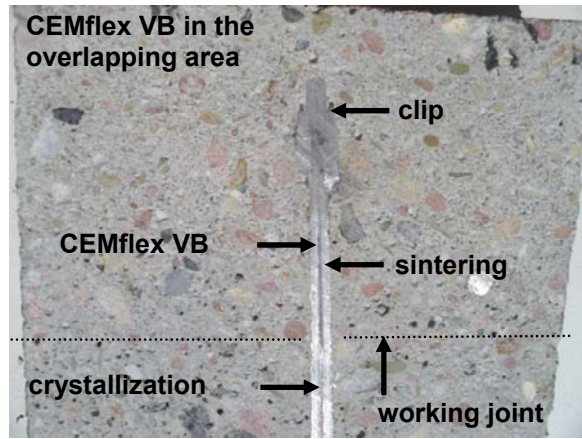
CEMflex VB white crystallization is already shown



Particle of the coating



Particle of the coating in reaction with water or liquids



The overlapping area of CEMflex VB (only 5cm required) will react and seal automatically by water ingress! The active waterproofing process is finished within only a few hours and as a result water has no chance to enter!

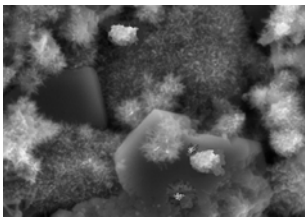
Crystallization! An active self healing process

► **CEMflex VB is an „active“ waterstop steel plate!**

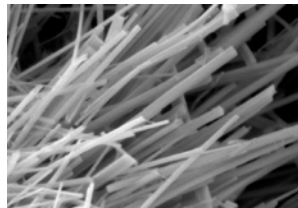




The CEMflex VB crystallization shown under a microscope

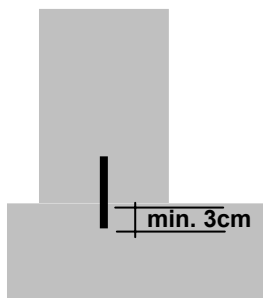


Calciumhydroxy based crystalline fibers

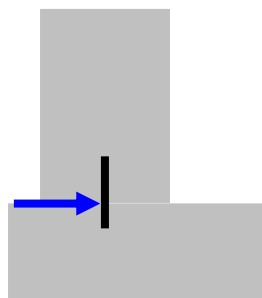


Calciumhydroxy based crystalline needles

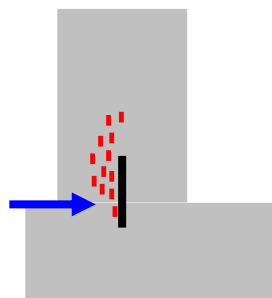
CEMflex VB



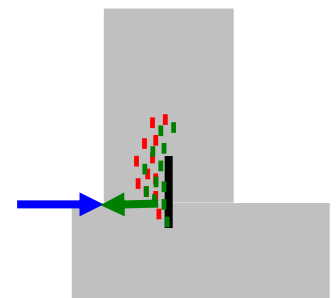
Beginning:
CEMflex VB has an extremely good connection to the surrounding concrete



Water will be stopped in the cold joint!



Beginning of the crystallization process



Beginning of the sintering in the structure of the concrete natural formation of limestone

This unique crystallization and sealing process is tested up to 5bar waterpressure at the University of Stuttgart / Germany

Pictures of CEMflex VB



CEMflex VB VerbundBlech / steel plate waterstop (with CEMflex Ω - holder)

CEMflex VB is special coated with a crystalline admixture on both sides. CEMflex VB can be fixed by using the special omega steel blade holder. The overlapping has to be at least 5 cm

No glueing of the overlapping is required.

The surface of CEMflex VB is not sticky and therefore is very easy to handle.

There is no plastic foil (protection sheet) which has to be removed before concreting.



CEMflex can be bent easily on site up to 90 degrees and more!



CEMflex VB can also be stuck into the fresh concrete. The overlappings have to be fixed only by using the CEMflex clip. The overlapping has to be at least 5 cm; glueing the overlappings is not required!



CEMflex VB properly embedded in the fresh concrete / first concrete section (min. 3 cm concrete cover is required).

CEMflex VB steel plate waterstop is an unique, patented technology **made in Germany**

