Construction

Sika - Hydrotite CJ-type

A Hydrophilic Rubber Combination Material For Sealing Site Formed Concrete Joints

Description

Sika-Hydrotite CJ-Type is hydrophilic rubber sealing used extensively throughout the construction industry to seal joints between precast concrete units, steel and other materials.

Sika-Hydrotite CJ-Type has been developed as an effective, simple and economical sealing material for site formed contruction joints.

Advantages

- In addition to packing effect Sika-Hydrotite expands itself as it absorbs water and fills up concrete joints gaps conforming to the gap variations and thus ensuring exellent sealing.
- Sika-Hydrotite CJ-Type has the property to absorb water, thus producing self expansion pressure which closes the water path for effective sealing.
- Sika-Hydrotite CJ-Type is easy to handle as it is light weight and installed after removal of the form.
- Sika-Hydrotite CJ-Type is treated with an expansion delay coating to preserve it from influence of water from freshly poured concrete and expansion taking place before curing of concrete.

Product Data

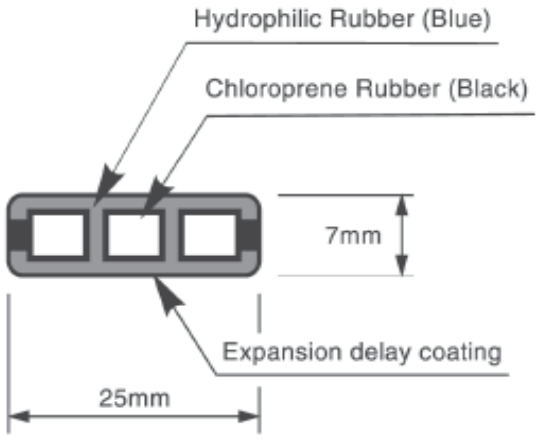
Packaging 4 x 10m rolls/ box

Storage Dry, cool, dark place do not exposed to sunlight

Technical Data

Base Hydrophilic rubber, Chloroprene rubber

Standard Dimension



Physical Properties

Item	Unit	Hydrophilic Rubber		Ch.Rubber	
		Standard	Typical	Standard	Typical
Density		1.30 – 1.50	1.35	1.30 – 1.50	1.41
Hardness	JIS_A	45 - 55	52	45 – 55	51
Tensile strength	Kgf/ cm^2	Min. 30	37	Min. 90	125
Elongation	%	Min. 600	760	Min. 400	435

Application

Preparation

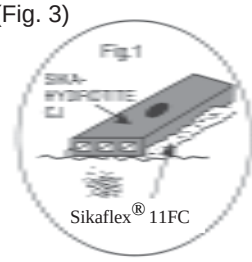
Surface condition of 1st concrete

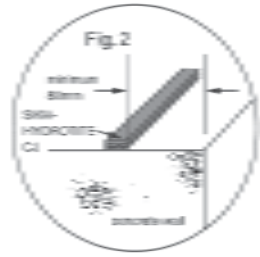
In situ concrete

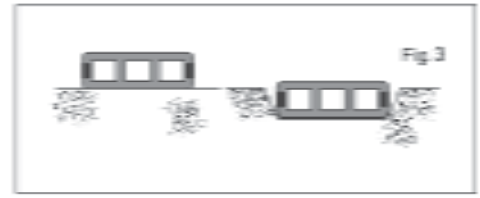
- Sika-Hydrotite CJ-Type can be applied on to plain surfaces of the 1st concrete layer without any groove but care must be taken to ensure that the strip is positioned in the center of the concrete thickness with adhesive and concrete nails.
- When the surface of the 1st conrete is uneven, it should be made completely flat using a piece of timber before the concrete cures or leveled with adhesive such as Sikaflex® 11FC. (fig.1)

Precast concrete

- Remove all surface laitance, mud or grease with a wire brush before bonding the Sika-Hydrotite CJ-Type with Sikaflex® 11FC. Generally, concrete nails on their own should not be used for the purpose of fastening Sika-Hydrotite in place.
- For best results, Sika-Hydrotite CJ-Type should be applied on even surface to ensure good bonding. It is recommended that a minimum of 80 mm cover on bothsides of the Sika-Hydrotite CJ-Type in position (Fig. 2).
- Any variation in this allowance shall depend on the concrete strength and reinforcement used.
- In such instances it is possible to reduce the cover to 50 mm.
- Sika-Hydrotite CJ-Type can be applied on to plain surfaces of concrete directly or in a formed groove. (Fig. 3)



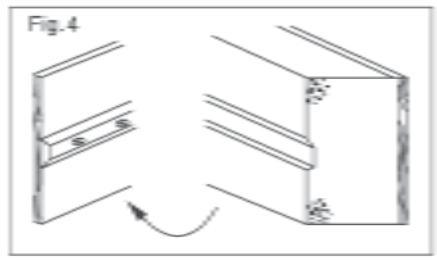


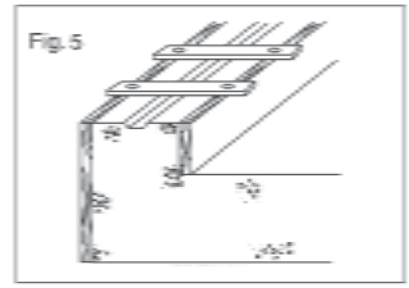


Making a Groove

When installing the form for the first concrete pour, it is recommended to make a groove for installing Sika-Hydrotite CJ-Type by arranging a ribbed form on the joint side of the concrete. (Fig. 4)

If a form is not used for making the joint side, apply a timber or an air-foamed Polyethylene/ Polystyrene strip having same cross section as CJ-Type on the surface of the 1st concrete and make a groove for the installation. (Fig. 5)



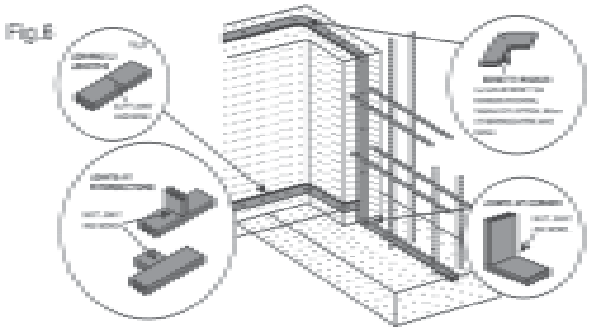


Joints

The length of Sika-Hydrotite CJ-Type should be joined by butt joints (Fig. 6)

As there are few holes at the section of the Sika-Hydrotite CJ-Type, joints must be carefully bonded to prevent water ingress.

To bond the joint use Sikaflex® 11FC (Fig. 7)



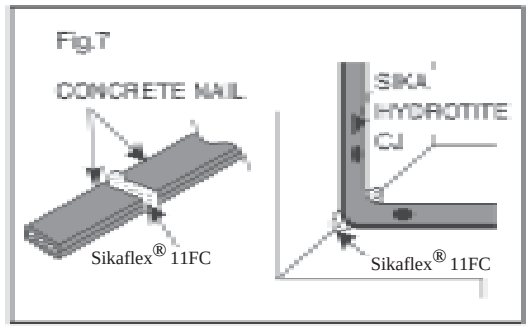
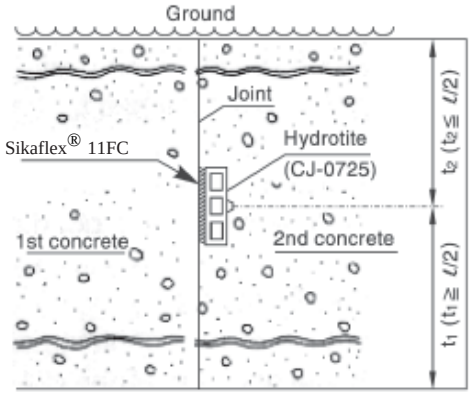


Fig.8



Bonding

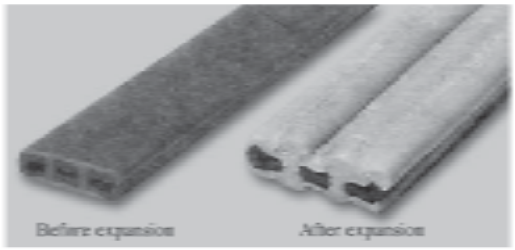
- Remove dust oil, ect. From the surface before application. An adhesive should be uniformly applied to the surface of 1st concrete layer.
- As adhesive use Sikaflex® 11FC. Insert the unipack Sikaflex® 11FC sausage into the caulking gun cut the extremity of the sausage. Put back the nozzle then apply the Sikaflex 11FC where Sika-Hydrotite CJ-Type to be placed. Lay the Sika-Hydrotite CJ-Type profile onto the freshly applied Sikaflex ®11FC (Fig. 8)
- In certain cases a certain pressure must be maintained during the curing of Sikaflex® 11FC.

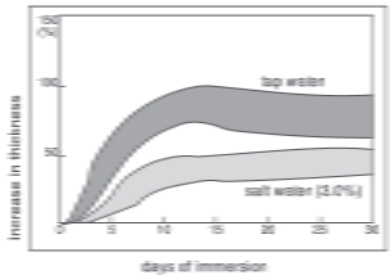
Notes on application/ Limits

- Sika-Hydrotite CJ-Type is not a sealing material for Expansion joints and should not be used as such.
- In order to avoid concrete cracking which may be caused by the expansion pressure of Sika-Hydrotite CJ-Type, a minimum of 80 mm concrete cover from the bonded positon of Sika-Hydrotite CJ-Type to each side and use of steel reinforcement is recommended

Internal Test report.

Swelling characteristics of Sika-Hydrotite CJ-Type depend on the water quality as typical examlpe shown below.





Chemical Resistance

The influence of pH values of concrete, grouting material and ground water upon the expansion of Sika-Hydrotite CJ-Type was tested using hydrophilic rubber as follows. The specimen was immersed in each solution for seven days and the retention value of tensile strength and elongation were measured.

Then, the specimen was removed from each solution and placed in tap water for seven days. The specimen was then compared with specimen that has been expanded in tap water only.

(Test result)

The retention value of both physical properties and expansion was compared with that of specimens tested in tap water. Sika-Hydrotite CJ-Type keeps the retention value 90% or more in all solutions listed in Table 2. In the Table 2, “o” indicate retention value 90% or more.

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Durability (Accelerated heat aging property)

In order to observe the material durability of Sika-Hydrotite CJ-Type, a heat aging test was carried out at 50° C for 720 days. Sika-Hydrotite CJ-Type hardens and loses elongation to some extent, due to the influence of heat and oxygen, however it still holds the retention value of elongation more than 70%.

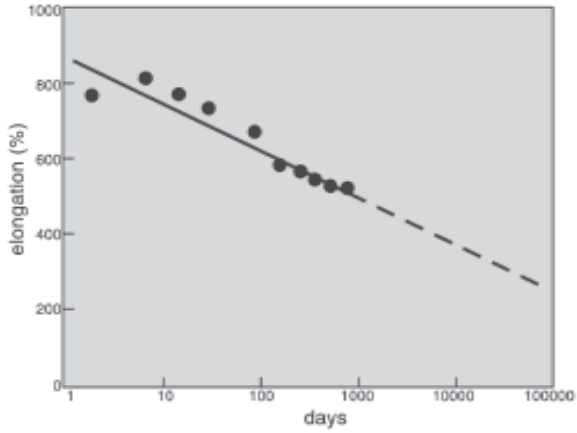

TABLE 2

Type of test solution	Change of physical properties after 7-day immersion		Retention of expansion value after 7-day immersion in tap water
	Tensile strength	Elongation	
PH 3 aqueous solution	0	0	0
PH 5 aqueous solution	0	0	0
PH 7 (tap water)	-	-	-
PH 9 aqueous solution	0	0	0
PH 11 aqueous solution	0	0	0
Ferrous aqueous solution	0	0	0
Bentonite aqueous solution	0	0	0
Grout aqueous solution	0	0	0

Health and Safety information

Toxicity	Non-toxic
Transportaion	Non hazardous
Important notes	To avoid any allergic skin reaction wear gloves. Wash hands after finishing application.

Disclaimer

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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