

Sika® Hydrotite CJ-Type

Hydrophilic strip for sealing site formed concrete joints

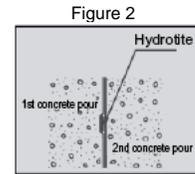
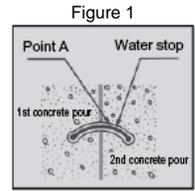
Product Description

Sika® Hydrotite CJ-Type is a hydrophilic rubber sealing strip used to seal site formed construction joints.

Note: Sika® Hydrotite CJ-Type is not a sealing material for expansion joints and should not be used as such

Characteristics / Advantages

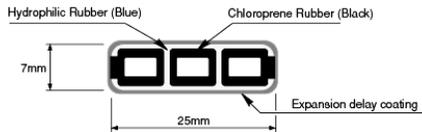
- In addition to the packing effect which conventional sealing materials have, Sika® Hydrotite CJ-Type expands as it absorbs water and fills up concrete joint gaps conforming to the gap variations and thus ensuring excellent sealing
- In the case of conventional waterstops, air tends to be trapped at Point A (Figure 1) after their application, thus adversely affecting the sealing effect. In contrast, Sika® Hydrotite CJ-Type is free from protrusions which could have an adverse effect on placement (Figures 1 & 2)
- Sika® Hydrotite is easy to handle as it is light weight
- Sika® Hydrotite is treated with an expansion delay coating to preserve it from the influence of water from freshly poured concrete and prevent expansion taking place before curing of concrete



Product Data

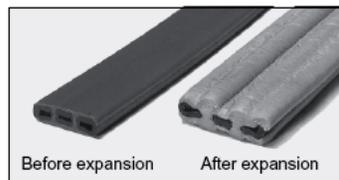
Form

Standard Dimensions (CJ-0725-3K)



Swelling Characteristics

The swelling characteristics of Sika® Hydrotite depends on the water quality as shown below:



Picture 1

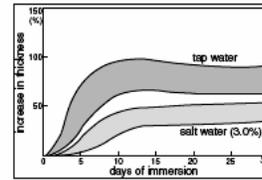


Chart 1

Packaging

4 x 10 meter rolls per carton



Storage

Storage Conditions / Shelf Life

Unlimited when stored in a cool, dry, well-ventilated location. Keep away from water, heat, flame and sunlight.

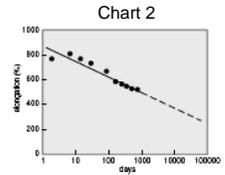
Technical Data

Physical Properties

Item	Hydrophilic Rubber		Chloroprene Rubber	
	Standard	Typical	Standard	Typical
Specific Gravity	1.40 ± 0.10	1.35	1.40 ± 0.10	1.35
Hardness (JIS-A)	50 ± 5	52	50 ± 5	52
Tensile Strength (Kgf/cm ²)	Min. 30	37	Min. 30	37
Elongation (%)	Min. 600	760	Min. 600	760

Durability (accelerated heat aging property)

In order to observe the material durability of Sika[®] Hydrotite, a heat aging test was carried out at +50°C for 720 days. Sika[®] Hydrotite hardens and loses elongation to some extent, due to the influence of heat and oxygen; however, it still holds the retention value of elongation by more than 70% (Chart 2).



Resistance

Chemical Resistance

The influence of pH values of concrete, grouting material and ground water upon the expansion of Sika[®] Hydrotite were tested 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 specimens that had been expanded in tap water only.

Type of Testing Solution	Change of Physical Properties after 7-day Immersion		Retention of expansion value after 7-day immersion in tap water following immersion in solution
	Tensile Strength	Elongation	
pH 3 aqueous solution	○	○	○
pH 5 aqueous solution	○	○	○
pH 7 (tap water)	–	–	–
pH 9 aqueous solution	○	○	○
pH 11 aqueous solution	○	○	○
Ferrous aqueous solution	○	○	○
Bentonite aqueous solution	○	○	○
Grout aqueous solution	○	○	○

Test Results: The retention value of both physical properties and expansion was compared with that of specimens tested in tap water. Sika[®] Hydrotite retains values of 90% or more in all solutions listed in the table above.

System Information

Application Details

Substrate Quality

For best results, Sika® Hydrotite CJ-Type should be applied to even surfaces to ensure good bonding. It is recommended that a minimum of 100 mm concrete cover be allowed on both sides of the Sika® Hydrotite CJ-Type position (Figure 3). Any variation in this allowance shall depend on the concrete strength and reinforcement used. In such instances, it is possible to reduce this cover to 50 mm.

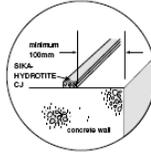


Figure 3



Figure 4

Sika® Hydrotite CJ-Type can be applied on to plain surfaces of the concrete directly or in a formed groove (Figure 4).

Surface Conditions of 1st Concrete

In-Situ-Concrete
Sika® Hydrotite CJ-Type can be applied on to plain surfaces of the 1st concrete layer without any grooves but care must be taken to ensure that the strip is positioned in the centre of the concrete thickness with adhesive and concrete nails.

When the surface of the 1st concrete is uneven, it should be made completely flat using a piece of timber before the concrete cures or levelled with adhesive such as SikaSwell®-S2 (Figure 10).

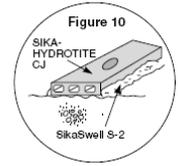


Figure 10

Precast Concrete

Remove all surface laitance, mud or grease with a wirebrush before bonding the Sika® Hydrotite CJ-Type with Neoprene (Chloroprene) adhesive (refer to section on Bonding). Generally, concrete nails on their own should not be used for the purpose of fastening Sika® Hydrotite CJ-Type in place.

Application Instructions

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 first concrete (Figure 5).

If a form is not used for making the joint side, apply a timber or an air-foamed polyethylene/ polystyrene strip having a same section as CJ-Type on the surface of the 1st concrete and make a groove for Sika® Hydrotite CJ-Type installation (Figure 6).

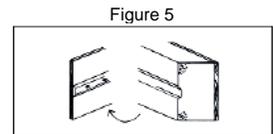


Figure 5

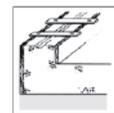


Figure 6

Joints

The length of Sika® Hydrotite CJ-Type should be joined by butt jointing (Figure 7). As there are few holes at the section of Sika® Hydrotite CJ-Type, joints must be carefully bonded with SikaSwell®-S2 to prevent water ingress (Figure 8).

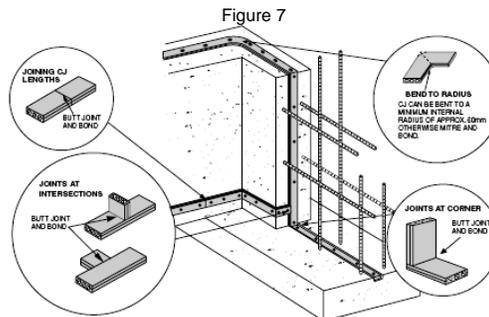


Figure 7

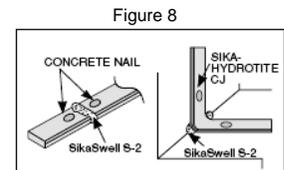


Figure 8

Bonding

Remove dust, oil, etc. from the surface where Sika® Hydrotite CJ-Type is to be applied. An adhesive should be uniformly applied to the surface of the 1st concrete layer.

Smooth and dry concrete surfaces (Figure 9)

- Use Neoprene (Chloroprene) adhesive
- If necessary, clean and/or dry surface
- Apply a thin even film of adhesive to both surfaces of the first concrete and the Sika® Hydrotite CJ-Type strip
- Allow an open time before bonding
- Align Sika® Hydrotite CJ-Type strip and press down firmly to ensure overall contact

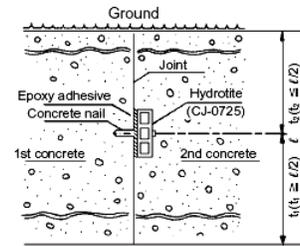


Figure 9

Rough and damp concrete surfaces (Table 2)

- It is advisable to use a two-component moisture tolerant epoxy adhesive, e.g. Sikadur®-31
- After mixing the main component and the hardener of the epoxy adhesive correctly, apply it on to the rough surface to obtain a smooth surface finish

Table 2: Adhesive to be used

Type of Adhesive	Surface Condition	
	Wet	Dry
Silicone	○	○
Epoxy	○	○
Rubber	-	○

- Concrete nails may be used to fix Sika® Hydrotite CJ-Type while the epoxy cures

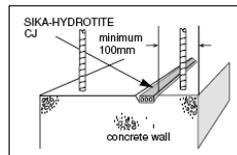
Rough and dry concrete surfaces

- Use SikaSwell®-S2, a one-component type water-swelling sealant to bond the Sika® Hydrotite CJ-Type strips
- Cut the nozzle of SikaSwell®-S2 diagonally and then apply it to the surface of the concrete
- Concrete nails may be used to hold Sika® Hydrotite CJ-Type while SikaSwell®-S2 cures

Notes on Application / Limitations

- In order to avoid concrete cracking which may be caused by the expansion pressure of Sika® Hydrotite CJ-Type, a minimum of 100 mm concrete cover measured from the bonded position of Sika® Hydrotite to each side and the use of steel reinforcement is recommended.
- When storing, please keep Sika® Hydrotite CJ-Type in a cool, dry place and do not expose it to water or sunlight
- Use Sika® Hydrotite CJ-Type only for site formed concrete joints in underground structures where constant damp and/or wet conditions are expected
- Before applying to the joints, do not expose Sika® Hydrotite CJ-Type to any water, rain, etc. After application, adequate measures should be taken to prevent its exposure to rain water, groundwater, etc. before the joint is covered with fresh concrete

Typical Areas of Application

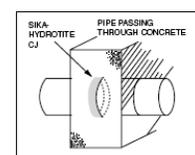


Wall Joints

Position CJ-Type centrally or towards either edge if preferred, observing the minimum edge distance

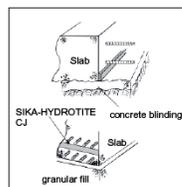


Joints in Concrete Lining for Tunneling Work (e.g. NATM)



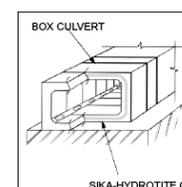
Pipes Passing Through Concrete

Position CJ-Type around pipes and other fittings passing through concrete



Slab Joints

Position CJ-Type centrally or towards either edge if preferred



Precast Concrete Joints (Box Culvert & Precast Concrete Panels)
Profile thicker than the design gap dimension should be selected from the profile list for best results. Adhere CJ-Type to the groove with neoprene adhesive continuously. Precast concrete panels should be connected with bolts

Value Base

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (available upon request) containing physical, ecological, toxicological and other safety-related data.

Legal Note

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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