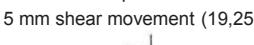
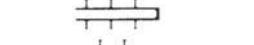


Sika Waterbars®

Product Description	Flexible Soft PVC-Waterbars to seal construction and expansion joints in concrete structures. Sika Waterbars are available in different sizes and types, depending on their use.
Uses	Sika Waterbars are used to seal construction and expansion joins in water retaining structures such as reservoirs, water towers, dams, spillways, canals, swimming pools, sewage tanks etc... as well as to keep water out of concrete structures such as basements, underground car parks, tunnels, subways retaining walls etc...
Advantages	<ul style="list-style-type: none"> ■ Multirib sections of the tortuous path principle. ■ High quality PVC for long durability. ■ Suitable for high water pressure. ■ Easy to install (clip fastening), easy to weld on site. ■ Many different sizes and types available, depending on their use ■ Factory produced cross sections available
Standards/Approvals	Sika Waterbars have been tested in accordance to: <ul style="list-style-type: none"> ■ BS. 2571 ■ DIN 18541, Part 2 ■ US. corps of Engineers: CRD-C 572 ■ ASTM D-412 & ASTM D-638
Product Data	
Colour	For construction joints: grey. For expansion joints: yellow
Packaging	15 m rolls. 30 m rolls.
Storage/Shelf Life	60 months from date of production if stored in unopened, undamaged and sealed original packaging, in dry conditions at temperatures not exceeding +30°C. Protect from UV light.
Technical Data	
Density	1.45 ± 0.15 kg/l
Chemical Base	Polyvinyl Chloride
Service Temperature	- 35°C to + 55°C
Tensile Strength	$\geq 10 \text{ N/mm}^2$ DIN 53455 $\geq 12.17 \text{ N/mm}^2$ CRD-C 573, ASTM D412 $\geq 11 \text{ N/mm}^2$ BS 2782 M320A
Tear Strength	$\geq 12 \text{ N/mm}^2$ DIN 53507 A
Shore A Hardness	90 ± 5 DIN 53505
Elongation at Break	$> 300 \%$ DIN 53455 $> 300 \%$ CRD-C 573, ASTM D412 $> 300 \%$ BS 2782 M320A
Chemical Resistance	Permanent: Water, seawater, sewage, road salt solutions. Temporarily: Diluted inorganic alkalis, mineral acids and mineral oils.
Alkali Resistance	Passed. CRD-C 572-65
Application Details	
Welding Temperature	~ 200°C.



Forms		Type	Width (cm)	Roll Length (m)	Nom. Thickness (mm ($\pm 10\%$))	Max. Water head (m)
Construction Joint						
<u>Light Profile</u>		V-20L V-24L V-32L	20 24 32	30 30 15	4 4 4.5	10 15 25
						
<u>Standard Profile</u>		V-15E V-20E V-24E V-32E	15 20 24 32	30 30 30 15	5 6 6.5 7	5 15 25 30
						
Expansion Joint						
<u>Light Profile</u>		O-20L O-25L O-32L	20 25 32	15 15 15	2.2 2.4 3	10 15 25
						
Centrally Placed Waterbars Installation in the center of concrete structure. Easy anchoring of waterbars to reinforcement with special fixing clips						
<u>Max. 20 mm expansion and 10 mm shear movement</u>						
<u>Standard Profile</u>		O-20E O-25E O-32E	20 25 32	15 15 15	5 6 7	15 25 30
						
<u>Max. 20 mm expansion and 10 mm shear movement</u>						
<u>M-22</u> <u>M-25</u> <u>M-35</u>		M-22 M-25 M-35	22 25 35	15 15 15	5 5 6	10 10 25
						
<u>Max. 40 mm expansion and 30 mm shear movement</u>						
Construction Joint						
<u>Surface Waterbars</u> Installation on the surface of concrete structures						
						
<u>AR-20*</u> <u>AR-25*</u> <u>AR-28</u> <u>AR-31</u>		AR-20* AR-25* AR-28 AR-31	20 25 28 31	15 15 15 15	3.5 3.5 3.5 4	5 10 15 15
						
Expansion Joint						
<u>Max. 10 mm expansion and 5 mm shear movement (19,25)</u>						
						
<u>DR-21*</u> <u>DR-26*</u> <u>DR-29</u> <u>DR-32</u>		DR-21* DR-26* DR-29 DR-32	21 26 29 32	15 15 15 15	3.5 3.5 3.5 4	5 10 15 15
						
<u>Max. 10 mm expansion and 10 mm shear movement (27,32)</u>						
Joint Finishing type Installation by pushing onto the formwork bowed onto joint lining						
						
<u>FA2-5</u> <u>FA3-10</u> <u>FA3-14</u>		FA2-5 FA3-10 FA3-14	2/5 3/10 3/14	25 25 25	~3 ~5 ~5	0 5 5
						

* only with four pins

Application

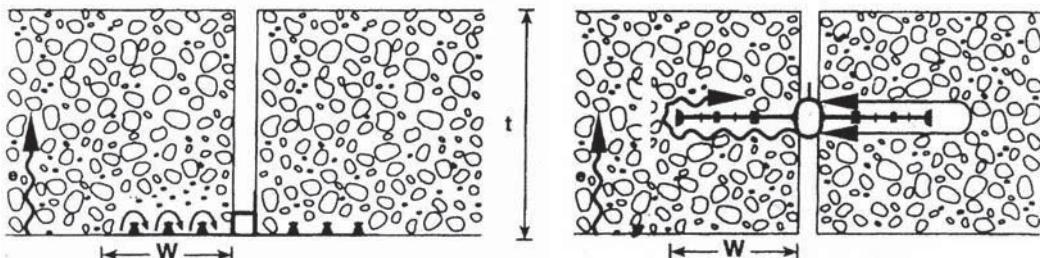
Selection

The selection of a suitable waterbar is governed by the type of joint, concrete thickness, grade of concrete, reinforcement position, expected movement (expansion/shear) as well as waterhead to which it is to be exposed to

General Guide lines:

Experience has shown that application of a few simple rules will ensure a satisfactory result:

- The overall width of the waterbar should be at little less or equal to the thickness of the concrete slab into which it is placed.
- The overall width of the waterbar should be at least six times the size of the largest aggregate used.



Installation/Fixation

Centrally Placed Waterbars:

Installation in the centre of the concrete structures. Easy anchoring of Sika Waterbars to reinforcement with special fixing clips (5 pieces per m).

Surface Waterbars

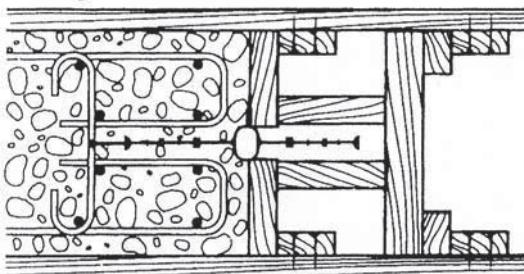
Installation on the surface of the formwork or on the surface of the base/drylean concrete.

Joint Finishing Types

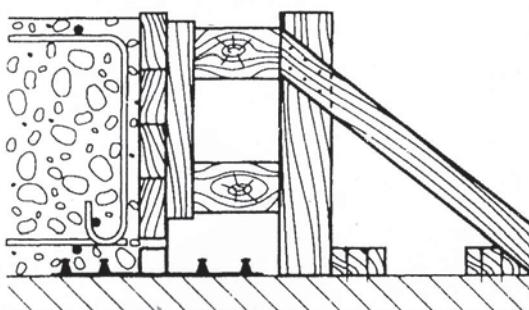
Installation by pushing onto the formwork or onto the joint lining.

Proper fixing of the waterbars to the reinforcement (or formwork) is essential, as are the careful pouring and compaction of the concrete. Fixing clips for internally placed waterbars are available.

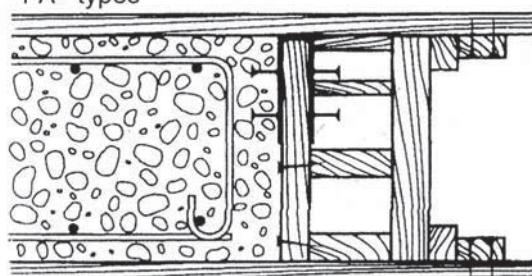
Fixing



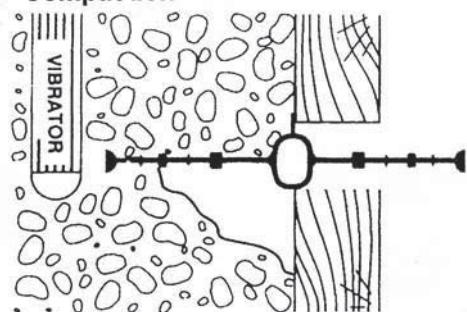
Centrally placed types



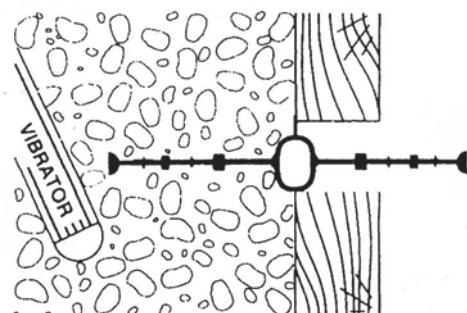
Externally placed types
FA - types



Compaction



Wrong



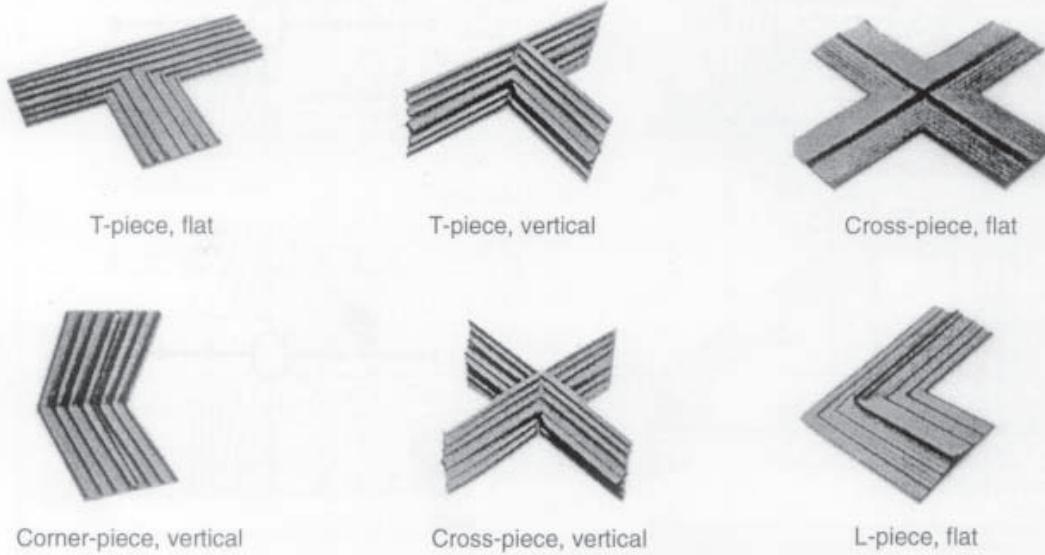
Correct

Construction

Welding Waterbars	Sika Waterbars [®] are made from virgin thermoplastic PVC and can therefore be welded easily. The ends are secured in a welding jig (available for each type) and heated with suitable welding equipment (also available), until an even, molten bead of PVC appears. The welding equipment is then removed and the molten ends pressed together firmly.		
Junction Pieces	Junction pieces can easily be manufactured on site. However, a wide range of standardized, factory made junction pieces, are available. All having a 30 cm free wing allowing easy butt-welding at site. For non standard junction pieces drawings must be provided, giving exact details required.		
Material requirement and number and type of welding.			
Type		Material*	Welding – type
Cross-piece	flat	1.20 m + 2.0 x width	2 mitre-weldings
Cross-piece	Vertical	1.20 m	2 butt-weldings
T-piece	flat	0.90 m + 1.5 x width	1 mitre-welding
T-piece	Vertical	0.09 m	1 butt-welding
L-piece	flat	0.60 m + 2.0 x width	1 mitre-welding
Corner-piece	Vertical	0.60 m,	1 butt-welding

* Free Wing: 30 cm (all)

Notes	<ul style="list-style-type: none"> ■ In case of negative water pressure surface waterbars cannot be used. ■ 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
Protective Measures	Use personal protective clothing. Change soiled work clothes and wash hands before breaks and after finishing work. Welding must only take place at well ventilated areas or while wearing an oxygen-mask.
Legal notes	<p>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. 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.</p>



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