

Sika Waterbar®





Flexible PVC waterstop

Description	Sika Waterbar® are constructed from flexible thermoplastic PVC. They are designed to stop the migration of water through construction and expansion joints in concrete structures. Sika Waterbar® are available in various sizes and profiles to suit all types of application.	
Uses	For the effective sealing of concrete construction and expansion joints in structures such as: <ul style="list-style-type: none"> ■ Basements ■ Water reservoirs ■ Sewage treatment plants ■ Swimming pools ■ Retaining walls ■ Lift shafts ■ Tunnels, culverts ■ Service pits 	
Advantages	<ul style="list-style-type: none"> ■ Sealing starts as soon as the concrete has hardened ■ Multi rib profile provides impenetrable barriers to water migration ■ Can be easily site welded - (welding knife is available) ■ Good chemical resistance ■ Available various kind of profiles for all type of application 	
Test		
Approval / Standards	Sika Waterbar® have been tested in accordance with: BS 2571 specification.	
Product Data		
Form / Colour	Flexible strip / Yellow	
Packaging	20 m rolls	
Storage	Dry, shaded place (protected from sunlight)	
Technical Data		
Base	Polyvinyl Chloride	
Density	~ 1.40 kg/ltr	BS2782:620
Shore a hardness	> 70	ISO 868-2003(E) BS2782:365B



Tensile strength	12 N/mm ² ± 5%	BS2782:320A ASTM D412-98
Elongation at break	300 % ± 5%	BS2782:320A ASTM D412-98
Water absorption	0.04% (at 23°C)	BS EN ISO 62:1999
Thermal stability	Minimum 70 (Congo Red test at 180°C)	BS2782:130A
Welding temperature	Approx. 180°C	
Service temperature	-35°C to +55°C	
Chemical resistance	Permanent: Seawater, sewage. Temporary: Diluted inorganic alkalis, mineral acids, mineral oils and fuels.	

Profiles

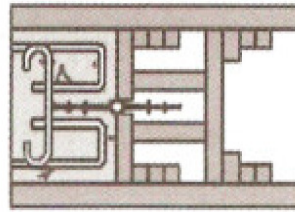
Uses	Type	Width mm (± 5mm)	Roll Length (m)	Nominal Thickness mm(±10mm)	
Centrally placed waterbars: Installation in the center of concrete structures					
Construction Joints		V-15	150	20	3.0 - 5.0
		V-20	200	20	3.0 - 5.0
		V-25	250	20	3.0 - 5.0
		V-32	320	15	3.0 - 8.0
Expansion Joints		O-15	150	20	3.0 - 4.5
		O-20	200	20	3.0 - 4.5
		O-25	250	20	3.0 - 4.5
		O-32	320	15	3.0 - 8.0
Surface waterbars: Installation on the surface of concrete structures					
Construction Joints		AR-25	250	20	4.0
Expansion Joints		DR-20	200	20	3.0
		DR-25	250	20	4.0

Application

Typical detailing of Sika-waterbars

Split formwork with
Sika-Waterbars "O" profile

Figure 1

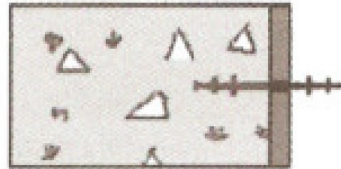


Fixing to formwork

The "O" profile Sika-Waterbars may also be used to in conjunction with split formwork. However care should be taken to ensure that the "O" ring is not squashed flat between two forms. This method of installation increases the capacity of the Sika-waterbar to accommodate expansion.

Formwork with
Sika-Waterbars "V" Profile

Figure 2



Fixing to formwork

The "V" profile Sika-waterbar is fitted into the split formwork or shuttering for casting centrally into the stopends. It is used for construction joints and movement joints where nominal movement is anticipated, such as basement or retaining walls.

Fixing to reinforcement

Pre-punched eyelets are located in the outer flanges of the profiles. These simplify the fixing of waterbars to the steel reinforcement with tie wires to ensure the waterbars are not displaced during concreting.

Placing concrete first stage

The Sika Waterbar[®] performs its function only if both sides are well embedded in the concrete. Avoid formation of honey combs by vibrating carefully.

The consistency of the concrete itself should be neither too plastic nor too stiff, and the aggregate must be well graded.

Placing of fresh concrete near the Sika Waterbar[®] requires care, as otherwise it will be forced from its position by the pressure of the fresh concrete, i.e. the ends will fold up. To prevent this, the same concrete pressure must be present on both sides of the Waterbar.

Placing concrete second stage

Removal of formwork in the neighborhood of Sika Waterbar[®] must be done with care.

The end of the Sika Waterbar should be thoroughly checked for honey-combing on the stop-end and repaired if necessary. It must also be cleaned of all hardened concrete remnants adhering from the first concrete stage. Further procedure is similar to the first stage.

Welding

On site welding can be undertaken using a Sika electric welding knife. Both ends of the joint are heated simultaneously on the faces of the welding knife until an even, molten bead of PVC appears. The welding knife is withdrawn and the Sika Waterbars are immediately pushed together. The joint should be held rigid until the plastic cools down and solidifies.

Check for any gaps or imperfect joints. Redo the welding if necessary.

Failures can be caused by irregularities of cut edges, insufficient heat, dust etc.

Limits on application / notes

Level differences, bends, junctions, etc. should be carefully considered before placing.

Health and Safety Information

Ecology	Can be disposed according to local law
Transportation	Non-hazardous
Toxicity	Non-toxic
Important note	Care should be taken to avoid breathing fumes and smoke during the PVC welding process. Hence, welding should be performed in open, well ventilated area. In case of doubt always follow the directions given on the pack or label.

Disclaimer	<i>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.</i>
-------------------	---



Sika Limited (Vietnam)
Nhon Trach 1 Industrial Zone,
Nhon Trach Dist., Dong Nai Province
Tel: (84-61) 3560 700 Fax: (84-61) 3560 699
vnm.sika.com sikavietnam@vn.sika.com

