BUILDING TRUST

PRODUCT DATA SHEET

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:

- Basements
- Water resevoirs
- Sewage treatment plants
- Swimming pool
- Retaining walls
- Lift shafts
- Tunnel, culverts
- Service pits

CHARACTERISTICS / ADVANTAGES

- 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

PRODUCT INFORMATION

Chemical Base	Polyvinyl Chloride	
Packaging	20 m rolls	
Appearance / Colour	Flexible Strip / Yellow	
Storage Conditions	Dry, shaded place (protected from sunlight)	
Density	~1.40 kg/ L	(BS2782:620)
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	~180 °C	
Service Temperature	-35 °C to +55 °C	
Packaging	20 m rolls	
Packaging	20 m rolls	

Profile

	Uses	Type	Width mm (± 5mm)	Roll Length	Nominal Thickness
Centrally Placed Waterbars: Installation in the center of concrete structures					
		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
		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					
		AR-25	250	20	4.0
		DR-20	200	20	3.0
		DR-25	250	20	4.0

Important: The indicated maximum waterhead for each waterbar type is related to the system behavious concrete-PVC normal design and based on practical experience

TECHNICAL

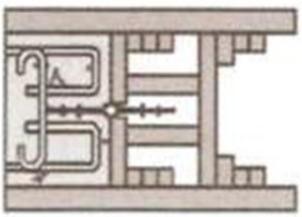
Shore of Hardness	> 70	(ISO 868-2003(E), BS2782:365B)
Tensile Strength	≥ 12 N/mm² ± 5 %	(BS2782:320A, ASTM D412-98)
Elongation At Break	≥ 300 % ± 5 %	(BS2782:320A, ASTM D412-98)
Maximum Resulting Movement	20 mm	
Chemical Resistance	Permanent: Seawater, sewage Temporary: Diluted inorganic alkalis, mineral acids, mineral oils and fuels	

SYSTEM INFORMATION

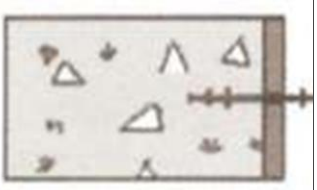
Application Details

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 slipt 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.

Split 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

APPLICATION INSTRUCTIONS

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 con-crete, i.e. the ends will fold up. To prevent this, the same concrete pres- sure 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 to- gether. 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.

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LIMITATIONS

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

BASIS OF PRODUCT DATA

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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regula- tions the declared data and recommended uses for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, stor- age and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-re- lated data.

LEGAL NOTES

The information, and, in particular, the recommenda- tions relating to the application and end-use of Sika products, are given in good faith based on Sika's cur- rent knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommenda- tions. In practice, the differences in materials, sub- strates and actual site conditions are such that no war- ranty 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 recom- mendations, or from any other advice offered. The user of the product must test the product’s suitability for the intended application and purpose. Sika re- serves 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