

## **Sika®-Waterbars**

### PVC Profile Waterstops for Joint Sealing

#### **Product Description**

**Sika®-Waterbars** are flexible waterstops based on plasticized PVC, produced in specific profiles to seal construction and expansion joints when cast in concrete. They are available in different sizes and types, depending on their use. Suitable for use in hot and tropical climates.

#### **Uses**

**Sika®-Waterbars** are used to waterproof construction and expansion joints in concrete structures such as those in water retaining structures including reservoirs, canals, sewage plants, dams, swimming pools etc. Plus those in the watertight construction of many buildings and structures including large basements, underground car parks, subways and sea walls etc.

#### **Characteristics / Advantages**

- High quality PVC for long durability
- Suitable for high water pressure
- Easy to weld on site
- Many different sizes and types available, depending on their use

#### **Tests**

##### **Standards / Approvals**

**Sika®-Waterbars** have been tested in accordance with:

- BS 903, BS 2571 (May 2006)
- DIN 18541, Part 2 (12.04.05)
- U.S. Corps of Engineers: CRD-C 572-74 (22.05.97)
- ASTM D 412-75 (04.07.00)
- ASTM D 638 (06.05.01)

#### **Product Data**

##### **Form**

Polyvinylchloride (PVC) profiles



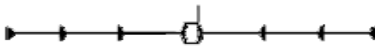

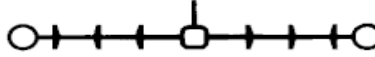



##### **Colours**

For construction joints	Types V, AK, AR, Forte	Grey - black
For expansion joints	Types DK, O, M, NOQ, DR	Yellow
Oil and bitumen resistant waterbars	See separate details	Green

##### **Packaging**

10 m rolls  
15 m rolls  
30 m rolls  
(Depends on type and size)

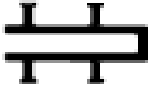


Uses		Type	Width cm	Roll length m	Nominal Thickness mm (±10%)
For Construction joints	<b>Centrally placed Waterbars</b>	V-15	15	30	2.5 - 5.0
	Installation in the centre of concrete structures. Easy anchoring of Sika®-Waterbars to reinforcement with special fixing clips.	V-20	20	30	3.0 - 7.0
		V-20 L	20	30	2.0 - 4.0
		V-24	24	30	2.5 - 4.0
		V-32	32	30	2.5 - 5.5
		AK-19	19	30	2.5 - 3.5
		AK-24	24	30	3.0 - 4.0
		AK-32	32	30	3.0 - 4.0
		Forte-19	19	30	3.0
	<b>Reinforced</b> 	Forte-24	24	30	3.0
		Forte-32	32	30	3.5
For Expansion joints		DK-19	19	30	3.0
		DK-24	24	15	3.0
		DK-32	32	15	3.0
	 Max. 20 mm expansion and 10 mm shear movement	O-15	15	15 & 30	2.5
		O-20	20	15	3.0
		O-20 L	20	15	2.0 – 3.5
		O-22	22	15 & 30	3.5
		O-22 L	22	15	2.5 – 4.0
		O-25	25	15	3.5 – 5.0
		O-25 L	25	15	2.0
		O-30	30	15	4.0 – 8.0
		O-32	32	15	3.5 – 5.0
		O-32 L	32	15	2.5
	 Max. 10 mm expansion and 5 mm shear movement	NOQ-15	19.5	15	2.0 – 3.0
		NOQ-22	27	15	3.0 – 4.0
	 Max. 40 mm expansion and 30 mm shear movement	M-22	22	15	5.0
		M-25	25	15	2.5 – 5.0
		M-35	35	15	4.0 – 7.0
Construction joints	<b>Surface Waterbars</b> Installation on the surface of concrete structures 	AR-20*	20	15	3.5
		AR-25*	25	15	3.5
		AR-28	28	15	3.5
		AR-31	31	15	4.0
		AR-50**	50	15	4.0
Expansion joints	 Max. 10 mm expansion and 10mm shear movement (DR-29, DR-32, DR-50)	DR-21*	21	15	3.5
		DR-26*	26	15	3.5
		DR-29	29	15	3.5
		DR-32	32	15	4.0
		DR-50**	50	15	4.0

\* Only with 4 pins

\*\* With 8 pins

### Joint Finishing Types

Max. 10mm expansion and 5mm shear movement 	Type	Width cm	Roll length m	Nominal thickness mm (±10%)	Water pressure resistance m
	FA 3 - 10	3/10	10	~ 5	Not resistant

### Junction / Jointing Pieces

A wide range of standard jointing pieces are available for jointing. All have a 30 cm free wing, allowing easy butt-welding at site. For the supply of non-standard sections drawings must be provided, giving exact details and measurements required.

Types of junction:

- Cross piece flat
- Cross piece vertical
- T-piece flat
- T-piece vertical
- L-piece flat
- Corner piece vertical (pins inside or outside)

### Special Waterbar Types (available on request)

- Bitumen and oil resistant Waterbars (Green B-Types)
- NBR-Waterbars
- Polyolefin-Waterbars
- Additional specialised Waterbars or types, and custom-made products

## Storage

<b>Storage Conditions</b>	Store in cool and dry conditions in original sealed packaging and at temperatures between +5°C and +30°C. Protect from heat and direct sunlight.
<b>Shelf Life</b>	60 months from date of production if stored properly in undamaged and unopened original sealed packaging.

## Technical Data

<b>Chemical Base</b>	Plasticised Polyvinyl Chloride (PVC-p)
<b>Density (at 23°C)</b>	~ 1.4 kg/l
<b>Service Temperature</b>	-35°C to +55°C

## Mechanical / Physical Properties

<b>Tensile Strength</b>	Waterbars for construction joints: ≥ 10 N/mm <sup>2</sup> (DIN 53455) Waterbars for expansion joints: ≥ 10 N/mm <sup>2</sup> (DIN 53455) For actual values refer to the test reports and the testing standard
<b>Elongation at Break</b>	Waterbars for construction joints: ≥ 200% (DIN 53455) Waterbars for expansion joints: ≥ 300% (DIN 53455) For actual values refer to the test reports and the testing standard

<b>Tear Strength</b>	≥ 12 N/mm <sup>2</sup>	(DIN 53507 A)
<b>Shore A Hardness</b>	~ 70 - 85	(DIN 53505)
<b>Chemical Resistance</b>	Permanent Exposure: Water, seawater and sewage at temperatures of 23°C Temporary Exposure: Dilute inorganic alkalis, mineral acids and mineral oils.	
<b>Alkali Resistance</b>	Pass	(US Corps of Engineers: CRD-C 572-65)

## Application Details

<b>Application Method / Tools</b>	<p><i>Centrally Placed Waterbars</i></p> <p>Installation in the centre of the concrete structures. Easy anchoring of <b>Sika®-Waterbars</b> to reinforcement with special fixing clips (5 pieces per m').</p> <p><i>Centrally Placed Reinforced Waterbars (Type Forte)</i></p> <p>Installation as with centrally placed waterbars. Due to their external reinforcement <b>Sika® Waterbars</b> Type Forte are more dimensionally stable and less fixing clips are necessary (approx. 2 pieces per m').</p> <p><i>Surface Waterbars</i></p> <p>Installation on the surface of the formwork or on the surface of the base/dry lean concrete.</p> <p><i>Joint Finishing Types</i></p> <p>Installation by pushing onto the formwork or onto the joint lining.</p> <p><i>Welding</i></p> <p><b>Sika®-Waterbars</b> are made from virgin thermoplastic PVC and can therefore be welded easily. The ends must be secured into a welding clamp (available for each type) and cut precisely. Then the cut edges must be 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 firmly together immediately.</p> <p>The welding temperature is ~ +200°C.</p>
<b>Notes on Application / Limitations</b>	In situations with negative water pressure surface waterbars cannot be used.

<b>Value Base</b>	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
<b>Local Restrictions</b>	Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the product uses.
<b>Health and Safety Information</b>	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 containing physical, ecological, toxicological and other safety-related data.
<b>Legal Notes</b>	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.

All products are manufactured under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.



Sika UAE L.L.C  
P.O. Box 126212  
Dubai,  
United Arab Emirates  
Phone: +971 4 4398200  
info@ae.sika.com  
http://gcc.sika.com

Sika Gulf B.S.C (c)  
P.O. Box 15776  
Adliya,  
Kingdom of Bahrain  
Phone: +973 17738 188  
sika.gulf@bh.sika.com  
http://gcc.sika.com

Sika Saudi Arabia Co. Ltd  
P.O. Box 112356,  
Jeddah 21371,  
Saudi Arabia  
Phone: +966 2 692 7079  
jeddah@sa.sika.com  
http://gcc.sika.com

