

# Sika® -Waterbars

## Joint Sealing PVC Profiles

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### Product Description

**Sika®-Waterbars** are 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. Suitable for use in hot and tropical climates.

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### Uses

**Sika®-Waterbars** are used to seal construction and expansion joints 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.

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### 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

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### Test Reports

**Sika®-Waterbars** have been tested in accordance to:  
British Standard 2571 (29.11.91)  
Vattenfall VU-SC: 8 (06.02.96)  
DIN 18541, Part 2 (20.03.96) *Report only available in German language*  
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)

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### Product Data

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#### Form

Polyvinylchloride membranes

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#### Colours

For construction joints: Types V, AK, AR, Forte = grey  
For expansion joints: Types DK, O, M, NOQ, DR = yellow

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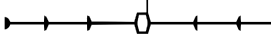
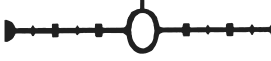
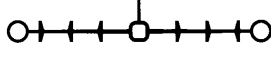

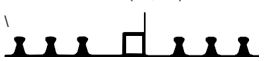
#### Packaging

15 m rolls  
30 m rolls

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## Types

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

\*Only with 4 pins

\*\* With 3 pins

## Joint Finishing Types



Type	Width cm	Roll length m	Nom. thickness mm (±10%)
FA 3 - 10	3/10	10	~ 5

### Junction Pieces

A wide range of standard jointing pieces are available. 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 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)
- vNBR-Waterbars
- Polyolefine-Waterbars
- Additional specialised Waterbars or types, and custom-made products

**Storage Conditions** Store in original sealed packaging in dry conditions at temperatures not exceeding +30°C. Protect from UV light.

**Shelf Life** 60 months from production date if stored in original unopened, undamaged and sealed packaging.

### Technical Data

**Chemical Base** Polyvinyl Chloride (other materials on request)

**Density** Approximately 1.3 kg/lit

**Service Temperature** -35°C to +55°C

**Tensile Strength** ≥ 10 N/mm<sup>2</sup> (DIN 53455)  
 ≥ 12.17 N/mm<sup>2</sup> (CRD-C 573, ASTM D412-98a)  
 ≥ 11 N/mm<sup>2</sup> (BS 2782 M 320A)

**Tear Strength** ≥ 12 N/mm (DIN 53507 A)

**Shore A Hardness** 70 ± 5 (Type Forte: 80 ± 5) (DIN 53505)

**Elongation at Break** ≥ 300% (Type Forte: ≥ 200%) (DIN 53455)  
 ≥ 300% (Type Forte: ≥ 200%) (CRD-C 573, ASTM D412-98a)  
 ≥ 300% (Type Forte: ≥ 200%) (BS 2782 M 320A)

**Chemical Resistance** Permanent: Water, seawater and sewage, road salt solutions.  
 Temporarily: Dilute inorganic alkalis, mineral acids and mineral oils.

**Alkali Resistance** Passed US Corps of Engineers: CRD-C 572-65

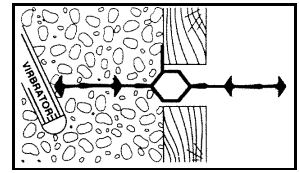
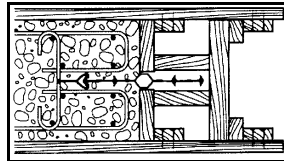
## System Information

### Application Instructions

#### Application Method / Tools

##### 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').

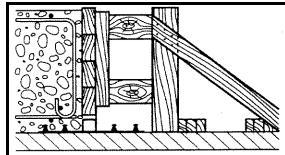


##### Centrally Placed Reinforced Waterbars (Type Forte )

Installation as with centrally placed waterbars. Due to their external reinforcement **Sika® Waterbars** Type Forte are more dimensionally stable and less fixing clips are necessary (approx. 2 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.

##### Welding

**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.

The welding temperature is approximately +200°C.

#### Notes on Application / Limitations

In case of negative water pressure surface waterbars cannot be used.

**Sika®-Waterbars** have been tested against continuous waterpressure up to 15 bar (150 m waterhead). The indicated maximum waterhead for each waterbar type is related to the system behaviour between concrete and PVC and based on practical experience.

#### Notes

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.

#### Safety

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

## Legal Notes

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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