

## PRODUCT DATA SHEET

# Sika Waterbar® AR VN

### EXTERNAL PVC WATERBAR FOR CONSTRUCTION JOINTS

#### DESCRIPTION

Sika Waterbar® AR VN is a flexible, external waterbar for construction joints made from thermoplastic PVC. It is designed to stop the migration of water through construction joints in concrete structures.

#### USES

For the effective sealing of concrete construction joints in structures such as:

- Water reservoirs
- Sewage treatment plants
- Swimming pools
- Basements
- Retaining walls
- Lift shafts
- Tunnels, culverts
- Service pits

#### PRODUCT INFORMATION

<b>Packaging</b>	20 m rolls (other lengths on request)
<b>Shelf Life</b>	5 years from date of production if stored properly
<b>Storage Conditions</b>	Dry, shaded place (protected from sunlight)
<b>Appearance / Colour</b>	Flexible strip / Yellow

#### SYSTEM INFORMATION

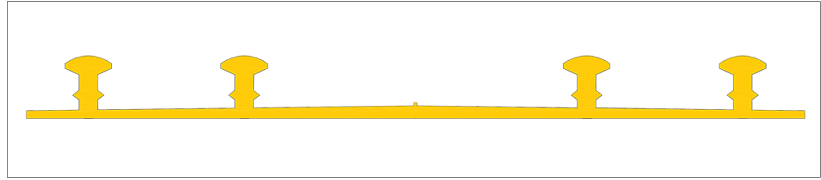
System Structure	Type	Width mm (± 5mm)	Roll Length (m)	Nominal Thickness mm (± 10%)	Height of ribs (mm) (± 5mm)
	AR-25	250	20	2.5 - 4.0	20

#### 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
- Good chemical resistance
- Integrated injection channels for subsequent back-filling
- Suitable for welding with PVC-P based Sikaplan® WP membranes

#### APPROVALS / STANDARDS

Test Report 21LM031601  
General Spec. for Civil Engineering Works 2006: Table 16.14 GMWS 20.5.13 Table 20.7



## TECHNICAL INFORMATION

Shore A Hardness	82	ASTM D2240
Tensile Strength	13.80 N/mm <sup>2</sup>	BS 2782: Pt 3: Method 320A to 320F
Elongation	306%	BS 2782: Pt 3: Method 320A to 320F
Service Temperature	-35°C to +55°C	
Chemical Resistance	Permanent: Seawater, sewage Temporary: Diluted inorganic alkalis, mineral acids, mineral oils and fuels.	

## 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.

## LIMITATIONS

- Level differences, bends, junctions, etc. should be carefully considered before placing.
- The quality of the joint sealing depends on the fully enclosure of the waterbar with concrete. In order to obtain a qualitative embedding, gravel nests have to be avoided.
- If there are very high stresses or difficult concreting conditions, the waterbars can be combined with integrated injection hoses installed locally on the top of the anchoring ribs to additionally inject / grout around the cast-in parts at a later date.

## ECOLOGY, HEALTH AND SAFETY

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 (MSDS) containing physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### Application

The Sika Waterbar® AR VN profile is installed flush with the external face of the concrete. It should be carefully fixed in the formwork before concreting. The Sika Waterbar® AR VN should be aligned and installed on the waterproofing substrate as centrally as possible to the segment joint.

Protection until the waterbar system is fully cast in the concrete.

Special care must be taken with the waterbar system ends.

Waterbars must be cleaned before casting in.

Do not install on the top surface of horizontal or slightly sloping concrete.

### Welding

The Sika Waterbar® AR VN is butt jointed by welding at minimum ambient temperature of + 5°C and dry weather conditions.

Jointing with adhesives is not permitted.

On site welding can be undertaken using an electric welding knife. The specific welding parameters must be adjusted and checked on samples prior to the welding work.

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 Waterbar® AR VN is immediately pushed together.

The joint should be held rigid until the plastic cools down and solidifies.

Check for any gaps or imperfect joints.

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

## LOCAL RESTRICTIONS

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 application fields.

## 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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### Product Data Sheet

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