

PRODUCT DATA SHEET

Sika Waterbar® - Tricomer® Type DA

External Waterbars for joint sealing in watertight concrete construction according to DIN 18541-1/-2

DESCRIPTION

Sika Waterbars Tricomer NB Type DA are highly flexible waterbars made from PVC/NBR copolymer for sealing expansion joints in watertight concrete structures.

They are available in a range of different types, shapes and sizes to suit different structures and applications.

USES

Application Fields:

- Joint sealing in concrete structures
- Expansion joint sealing in situ concrete

Typical Structures:

- Residential building basements
- Commercial building basements, underground car parks
- Water treatment plants
- Dams

Principles for Application:

- Design and installation principles according to DIN 18197
- Jointing system in accordance with DIN 18197 and DIN 18541

CHARACTERISTICS / ADVANTAGES

- High tensile strength and elongation
- Permanent flexibility and high resilience
- Suitable for medium water pressures and stress
- Resistant to all natural mediums aggressive to concrete
- Not bitumen resistant
- Resistant to a broad spectrum of chemical agents (testing necessary for any specific situations)
- Robust sections for handling on site
- Weldable

APPROVALS / STANDARDS

Standards/Directives:

- DIN 18541-1/-2
- DIN 18197
- WU - Directive DAfStb.
- Welding Instructions
- Welding Equipment Instruction Manual
- Method Statements

Test Certificate / Approvals:

- Certificate of Conformity DIN 18541, parts 1 and 2
- External monitoring by MPA NRW
- Test certificates on resistance to sewage slurry, liquid manure and municipal wastewater
- Manufacturer's test certificate, other tests and approvals as required

PRODUCT INFORMATION

Chemical Base

Tricomer NB = thermoplastic copolymer based on PVC-P with NBR, not bitumen resistant.

Packaging

- Standard rolls 20 or 25 m dependent on profile, on euro or disposable pallets
- Prefabricated formpieces supplied on euro or disposable pallets dependent on size

Shelf Life

The product does not expire if stored correctly

Storage Conditions

- To be stored on the pallets as supplied on a flat base
- For long-term storage ≥ 6 months in enclosed areas: The storage area should be covered, cool, dry, free from dust and moderately ventilated. The Tricomer waterstops must be protected from heat sources and strong artificial lights with a high UV content
- Short-term storage > 6 weeks and < 6 months in enclosed areas on construction sites, outdoors: As for long-term storage i.e. in dry storage protected by suitable covers from direct sunlight, snow and ice or any other form of contamination, store separate from other potentially harmful materials, plant and equipment such as structural steel, reinforcement or fuels etc., store away from traffic and site roads in a dry area
- Short-term storage ≤ 6 weeks on construction sites, outdoors: Protected from contamination or damage, Protected by suitable covers from strong sunlight and snow or ice

Appearance / Colour

Black

TECHNICAL INFORMATION

Shore A Hardness	67 \pm 5	DIN 53505
Tensile Strength	≥ 10 MPa	DIN EN ISO 527-2
Elongation	≥ 350 %	DIN EN ISO 527-2
Tear Strength	≥ 12 N/mm	DIN ISO34-1
Service Temperature	For pressurised water	- 20°C bis + 40°C
	For non pressurised water	- 20°C bis + 60°C

Chemical Resistance

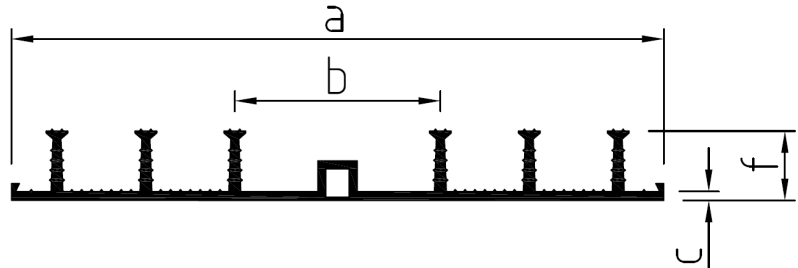
Exposure to different temperatures and chemicals:
For special stresses or exposure to different temperatures and/or chemical mediums outside the substances or situations specifically defined in DIN 4033, separate tests are always necessary.

SYSTEM INFORMATION

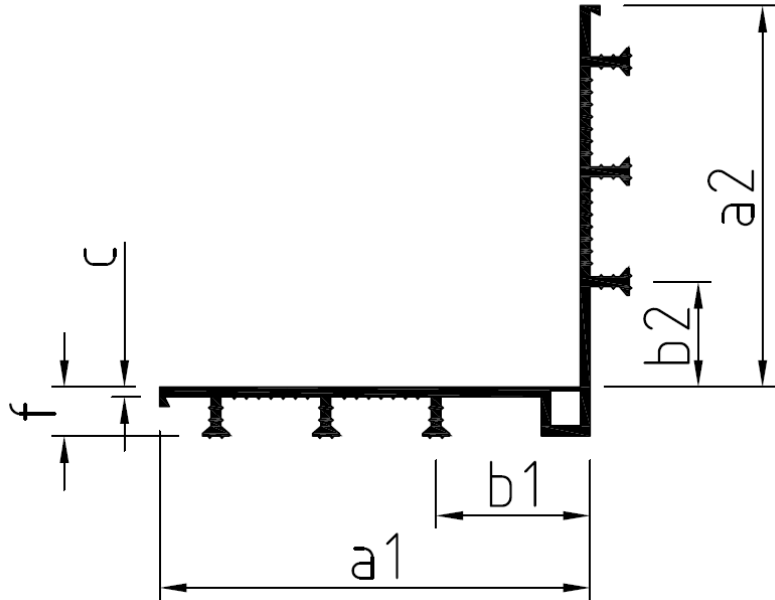
System Structure

Forms:

The limits of water pressure and stress given in the tables below apply to standard uses without specific additional testing. Different values may be used when precise information on all of the relevant stresses and structural requirements are available.



Total width (mm) a	Width of expansion part (mm) b	Thickness (mm) c	Anchoring ribs N / f (mm)	Water pressure (bar)	Resulting movement Vr (mm)
DA 240/25					
240	90	4,5	4 / 25	0 / 0,2	25 / 20
DA 240/35					
240	104	5	4 / 35	0 / 0,2	25 / 20
DA 320/25					
330	104	4,5	6 / 25	0 / 0,3	27 / 20
DA 320/35					
330	104	5	6 / 35	0 / 0,7	30 / 20
DA 500/25					
500	124	4,5	8 / 25	0 / 0,3	35 / 20
DA 500/35					
500	124	5	8 / 35	0 / 1,0	35 / 20



Total width (mm)	Width of movement part (mm)	Thickness (mm)	Width of sealing part N / f (mm)	Water pressure (bar)	Resulting movement Vr (mm)
DA 240					
Edge A *					
130/111	55/36	4,5	4 / 20	0 ¹⁾	15 ¹⁾
DA 240					
Edge W *					
130/131	55/56	4,5	4 / 20	0 ¹⁾	15 ¹⁾
DA 320					
Edge A *					
176/156	63/43	4,5	6 / 20	0 ¹⁾	15 ¹⁾
DA 320					
Edge W *					
176/176	63/63	4,5	6 / 20	0 ¹⁾	15 ¹⁾

A = Anchoring ribs external W = Anchoring ribs reciprocal

* Waterbar acc. to DIN 18541-2

¹⁾ Special project-related data

Vr = Resulting movement $Vr = (v_x^2 + v_y^2 + v_z^2)^{1/2}$

N = Number of anchoring ribs

f = Height of profile

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.

ECOLOGY HEALTH AND SAFETY

APPLICATION INSTRUCTIONS

APPLICATION METHOD / TOOLS

General

As specified in DIN 18197 only butt joints should be formed on site with Sika Waterbars Tricomer NB Type DA.

Prefabricated formpieces:

Standard formpieces (flat or vertical) for Sika Waterbars Tricomer NB Type DA include: Cross pieces, T-pieces, L-pieces.

Prefabricated formpieces help to reduce the required butt joints on site to a minimum.

Special formpieces:

Combined formpiece systems using combinations of different standard connections and profiles.

The standard maximum total length of formpiece systems is 20 m. Longer formpiece systems on request.

Handling:

As specified in DIN 18197.

- Careful transport and handling on site
- Installation only at waterbar material temperatures $\geq 0^{\circ}\text{C}$
- Protection is required until the waterbar system is fully cast in
- Special care must be taken of free waterbar ends
- Waterbars must be cleaned before casting in

Application:

- External waterbars are to be installed flush with external face of the concrete. Do not install on the top surface of horizontal or slightly sloping concrete.

Detailed information on installation is given in the relevant method statement and instruction for use. 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.

Joining on site:

The thermoplastic Sika Waterbars Tricomer NB Type DA are butt jointed by welding according to DIN 18197.

Joining with adhesives is not permitted.

Requirement: Minimum ambient temperature $+ 5^{\circ}\text{C}$ and dry weather conditions.

Site joints must be formed only by trained and qualified personnel. The welding training certificates are valid for 2 years.

Training courses leading to certification are run by Sika Deutschland GmbH, Stuttgart.

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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.



Product Data Sheet

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