BUILDING TRUST

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 insitu 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

FEATURES

- 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

CERTIFICATES AND TEST REPORTS

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

Composition	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 For information about the available profiles and packaging sizes sold in Denmark, please contact our customer service.

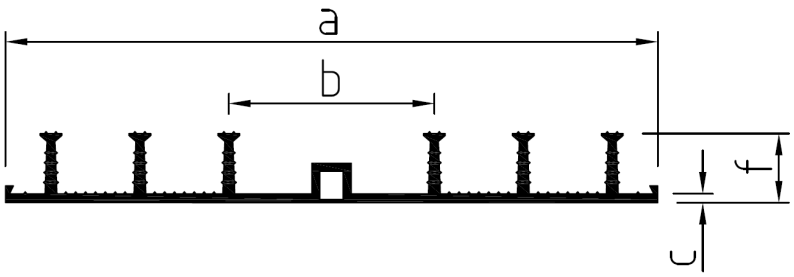
Appearance and colour	Black
Shelf life	The product does not expire if stored correctly .
Storage conditions	▪ To be stored on the pallets as supplied on a flat base ▪ For long-term storage ≥ 6 months in enclosed areas: The storage area should be covered, cool, dry, free from dust and moderately ventilated. 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

TECHNICAL INFORMATION

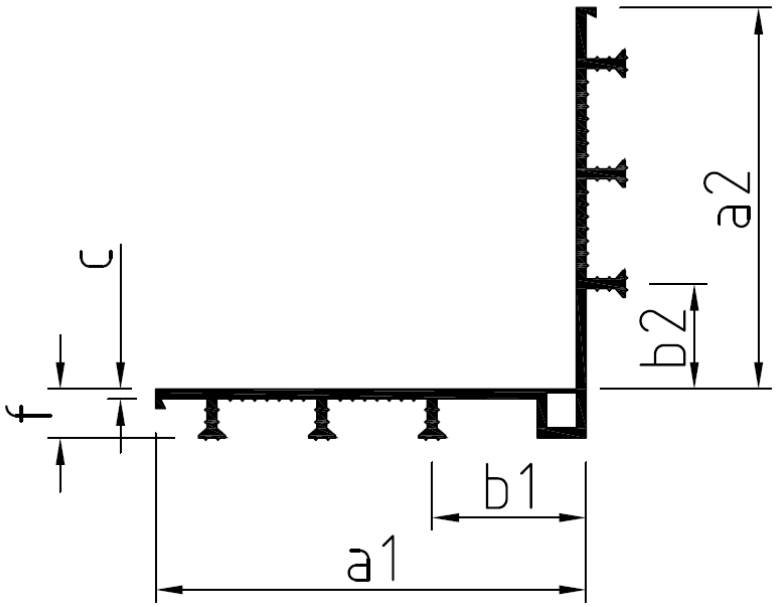
Shore A hardness	67 ± 5	DIN 53505
Tensile strength	≥ 10 MPa	DIN EN ISO 527-2
Elongation	≥ 350 %	DIN EN ISO 527-2
Tear strength	≥ 12 N/mm	DIN ISO34-1
Chemical resistance	Exposure to different temperatures and chemicals: For special stresses or exposure to different temperatures and/or chemical mediums outside the substances or situations specifically defined in DIN 4033, separate tests are always necessary.	
Service temperature	For pressurised water For non pressurised water	- 20°C bis + 40°C - 20°C bis + 60°C

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 momevent 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 = $(v_x^2 + v_y^2 + v_z^2)$ ½
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 ≥ 0°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.

Jointing on site:
The thermoplastic Sika Waterbars Tricomer NB Type DA are butt jointed by welding according to DIN 18197.
Jointing with adhesives is not permitted.
Requirement: Minimum ambient temperature + 5°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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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