

## PROOFMATE - WATERSTOPS

### General Building Authority Test Certificate



#### Properties:

*PROOFMATE-WATERSTOPS* based on PVC (PVC = polyvinylchloride) are profiles used to seal joints in civil engineering and underground structures, as well as in concrete construction and ensure a durable waterproofing. The choice of the right waterproofing band depends on the type of joint and the stresses that govern the structure.

- a. types of joints (dilatation, contraction and construction joints, etc.)
- b. Water stress due to pressure, surface water, groundwater, etc.
- c. Influences from shrinkage, contraction, temperature changes, climatic stress and dynamic loads.

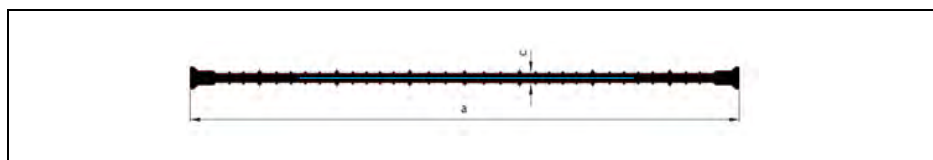
PVC-Waterstops are suitable for the application in: Bridges, chemical plants, Industrial areas, sewer plants, Hydroelectric plants, tunnels, potable water reservoirs, dams, retaining walls, pools, locks, etc..

#### Technical data:

##### **NB series (non-bitumen resistant \*):**

Elongation at break	≥ 275 %	DIN EN ISO 527
Tensile strength	≥ 10 N/mm <sup>2</sup>	DIN EN ISO 527
Shore A hardness	78 ± 5	DIN ISO 7619-1

\* bitumen resistant quality (BV) on request

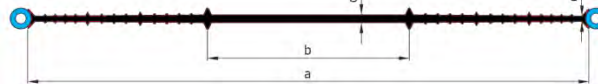


Type	a [mm]	c [mm]
Flex 10 NB **	100	4.5
Flex 15 NB **	150	4.5
Flex 19 NB **	190	4.5
Flex 24 NB **	240	4.5
Flex 32 NB **	320	5



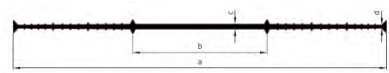
Type	a [mm]	c [mm]
Flex 19 SL NB **	190	4.5
Flex 24 SL NB **	240	4.5

\*\* spring steel reinforced



Type	a [mm]	b [mm]	d [mm]
A 32 NB IH ***	320	100	5

\*\*\* integrated injection hoses



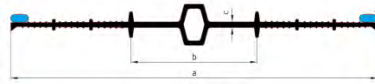
Type	a [mm]	b [mm]	c [mm]	d [mm]
A 10 NB	100	20	3	2.5
A 11 NB	110	25	3	2.5
A 15 NB	150	45	3	2.5
A 19 NB	190	70	3	2.5
A 24 NB ****	240	80	3.5	2.5
A 32 NB ****	320	100	4.5	3
A 50 NB ****	500	150	6	3.5

\*\*\*\* also available according to DIN 18541 part 1+2 NB

Elongation at break	≥ 350 %	DIN EN ISO 527
	≥ 200 % (at -20°C)	DIN EN ISO 527
Tensile strength	≥ 10 N/mm <sup>2</sup>	DIN EN ISO 527
Shore A hardness	67 ± 5	DIN ISO 7619-1

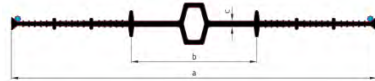


Type	a [mm]	b [mm]	c [mm]	d [mm]
D 11 NB	110	40	3.5	2.5
D 15 NB	150	50	3.5	2.5
D 19 NB	190	65	3.5	2.5
D 24 NB	240	80	4	3
D 32 NB	320	110	5	3.5
D 35 NB	350	110	5	3.5
D 50 NB	500	160	6	4
DEM 25 NB	250	120	6	5
DEM 32 NB	320	170	6	5
DDS 32 NB	320	120	8	5

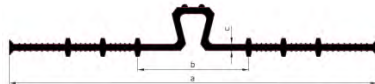


Type	a [mm]	b [mm]	c [mm]	d [mm]
<b>D 15 SL NB **</b>	150	50	3.5	2.5

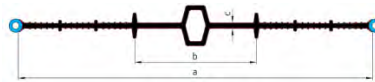
\*\* spring steel reinforced



Type	a [mm]	b [mm]	c [mm]	d [mm]
<b>D 15 ML NB</b>	150	50	3.5	2.5

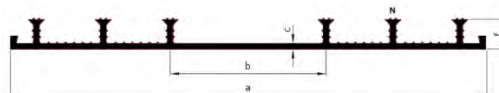


Type	a [mm]	b [mm]	c [mm]
<b>OM 25 NB</b>	250	75	6
<b>OM 35 NB</b>	350	95	6
<b>OM 50 NB</b>	500	190	7

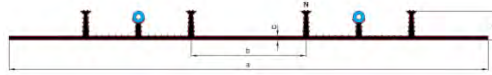


Type	a [mm]	b [mm]	c [mm]
<b>D 32 NB IH ***</b>	320	110	5

\*\*\* integrated injection hoses

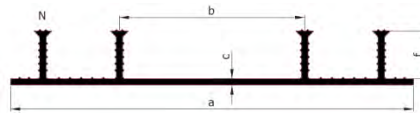


Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
<b>AA 19 NB</b>	190	66	4	15	4
<b>AA 24 NB</b>	240	90	4	20	4
<b>AAS 24 NB</b>	240	90	4	24	4
<b>AA 24/3/4 NB</b>	240	115	5	35	4
<b>AA 32 NB</b>	320	105	4	20	6
<b>AAS 32 NB</b>	320	105	4	25	6
<b>AA 32/3/6 NB</b>	320	105	5	35	6
<b>AA 50/2/6 NB</b>	500	235	5	20	6
<b>AA 50/2/8 NB</b>	500	125	5	20	8
<b>AA 50/3/6 NB</b>	500	235	5	35	6
<b>AA 50/3/8 NB</b>	500	125	5	35	8

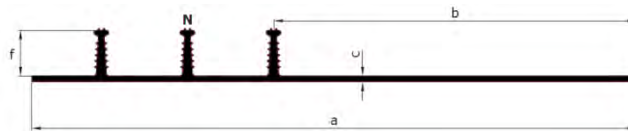


Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
AA 50/30/6 NB IH ***	500	120	4	30	6
AA 50/30/6 17 NB ICH ***	500	170	4	30	6
AA 40/30/4 NB ICH ***	400	170	4	30	4
AA 60/30/6 NB ICH ***	605	275	4	30	4

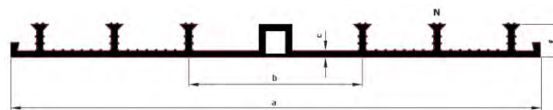
\*\*\* integrated injection hoses



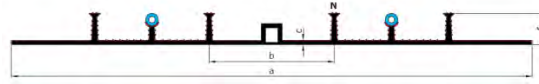
Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
AA 24/30/4 NB Free Edge	250	115	4	30	4



Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
AA 40/30/3 NB Flat	400	240	4	30	3

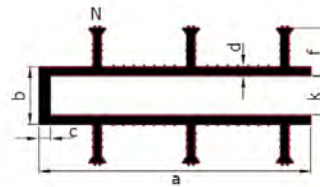


Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
AD 19 NB	190	92	4	17	4
AD 24 NB	240	90	4	20	4
AD 24/3/4 NB	250	115	5	35	4
AD 32 NB	330	105	4	20	6
ADS 32 NB	330	105	4	25	6
AD 32/3/6 NB	330	105	5	35	6
AD 50/2/6 NB	500	235	5	20	6
AD 50/2/8 NB	500	125	5	20	8
AD 50/3/6 NB	500	235	5	35	6
AD 50/3/8 NB	500	125	5	35	8

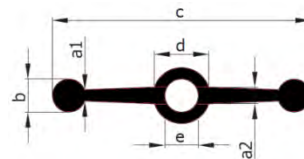


Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
<b>AD 50/30/6 NB IH***</b>	500	120	4	30	6

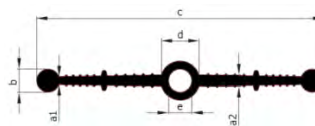
\*\*\* integrated injection hoses



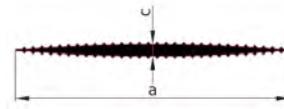
Type	a [mm]	b [mm]	k [mm]	c [mm]	d [mm]	f [mm]	locking ribs (N)
<b>FV 50/20 NB</b>	50	20	10	6	5	25	2
<b>FV 50/20/30 NB</b>	50	20	10	6	5	35	2
<b>FV 50/30 NB</b>	50	30	20	6	5	25	2
<b>FV 50/30/30 NB</b>	50	30	20	6	5	35	2
<b>FV 70/30/40 NB</b>	70	30	20	6	5	45	2
<b>FV 70/50/40 NB</b>	70	50	40	6	5	45	2
<b>FV 100/30 NB</b>	95	30	20	6	5	25	4
<b>FV 140/30 NB</b>	140	30	20	6	5	25	6
<b>FV 140/30/30 NB</b>	140	30	20	6	5	35	6
<b>FV 140/30-130 NB</b>	140	125	20	6	5	25	6
<b>FV 140/40 NB</b>	140	40	30	6	5	35	4
<b>FV 140/60 NB</b>	140	60	50	6	5	35	4



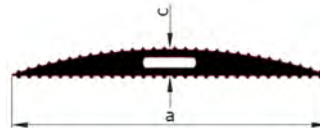
Type	c [mm]	d [mm]	e [mm]	a2 [mm]	a1 [mm]	b [mm]
<b>HD 10 NB</b>	100	22	13	6.5	4.5	13



Type	c [mm]	d [mm]	e [mm]	a2 [mm]	a1 [mm]	b [mm]
<b>HAD 16 NB</b>	160	22	13	6.5	4.5	13



Type	a [mm]	c [mm]
<b>S 8 NB *****</b>	80	5
<b>S 12 NB *****</b>	120	5



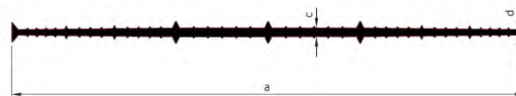
Type	a [mm]	c [mm]
<b>S 12 NB cavity *****</b>	120	5

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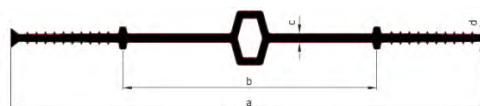
Elongation at break	≥ 250 %	DIN EN ISO 527
Tensile strength	≥ 10 N/mm <sup>2</sup>	DIN EN ISO 527
Shore A hardness	86 ± 5	DIN ISO 7619-1

#### **TM series (bitumen resistant):**

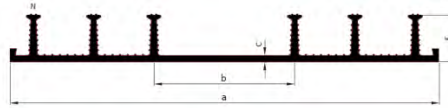
Elongation at break	≥ 400 % ≥ 200 % (at -20°C)	DIN EN ISO 527 DIN EN ISO 527
Tensile strength	≥ 10 N/mm <sup>2</sup>	DIN EN ISO 527
Shore A hardness	65 ± 5	DIN ISO 7619-1



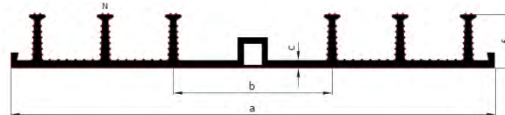
Type	a [mm]	c [mm]	d [mm]
<b>ATM 24</b>	240	5	3.5
<b>ATM 32</b>	320	5.5	3.5



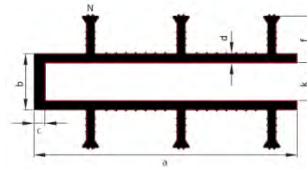
Type	a [mm]	b [mm]	c [mm]	d [mm]
<b>DTM 25</b>	250	120	6	5
<b>DTM 32</b>	320	170	6	5
<b>DTM 50 L</b>	500	150		
<b>DTM 25</b>	250	120	9	5
<b>DTM 32</b>	320	120	9	5



Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
AATM 25	250	115	5	35	4
AATM 32	330	105	5	35	6



Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
ADTM 25	250	115	5	35	4
ADTM 32	330	105	5	35	6



Type	a [mm]	b [mm]	k [mm]	c [mm]	d [mm]	f [mm]	locking ribs (N)
FVTM 50/20/30	50	20	10	6	5	35	2
FVTM 50/30/30	50	30	20	6	5	35	2
FVTM 70/30/30	70	30	20	6	5	45	2
FVTM 70/50/40	70	50	40	6	5	45	2
FVTM 100/30	95	30	20	6	5	25	4
FVTM 140/30	140	30	20	6	5	25	6
FVTM 140/30 P	140	30	20	15	5	25	6

### DIN series (non-bitumen resistant \*):

Elongation at break

≥ 350 %

DIN EN ISO 527

≥ 200 % (at -20°C)

DIN EN ISO 527

Tensile strength

≥ 10 N/mm<sup>2</sup>

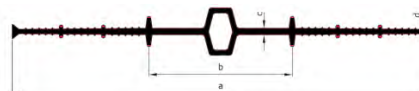
DIN EN ISO 527

Shore A hardness

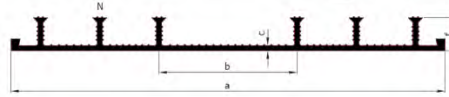
67 ± 5

DIN ISO 7619-1

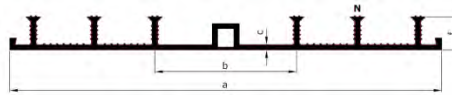
\* bitumen resistant quality (BV) on request



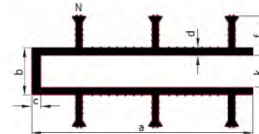
Type	a [mm]	b [mm]	c [mm]	d [mm]
D 240 DIN NB	240	80	4	3
D 320 DIN NB	320	100	5	3.5
D 500 DIN NB	500	150	6	4.5
D 240/6 DIN NB	240	120	6	5
D 320/6 DIN NB	320	170	6	5



Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
AA 240 DIN NB	240	90	4	20	4
AA 320 DIN NB	320	100	4	25	6
AA 500 DIN NB	500	120	4	25	8
AA 240/20 DIN NB	250	90	4	24	4
AA 240/30 DIN NB	250	115	5	35	4
AA 320/30 DIN NB	330	105	5	35	6
AA 500/30 DIN NB	500	125	5	35	8



Type	a [mm]	b [mm]	c [mm]	f [mm]	locking ribs (N)
DA 240 DIN NB	240	90	4	20	4
DA 320 DIN NB	320	100	4	25	6
DA 500 DIN NB	500	120	4	25	8
DA 240/20 DIN NB	240	90	4	24	4
DA 240/30 DIN NB	250	115	5	35	4
DA 320/30 DIN NB	330	105	5	35	6
DA 500/30 DIN NB	500	125	5	35	8



Type	a [mm]	b [mm]	k [mm]	c [mm]	d [mm]	f [mm]	locking ribs (N)
FA 50/30 DIN NB	50	30	20	5	5	25	2
FA 90/30 DIN NB	90	30	20	5	5	25	4
FA 130/30 DIN NB	130	30	20	5	5	25	6
FA 50/30/30 DIN NB	50	30	20	6	5	35	2
FA 70/30/40 DIN NB	70	30	20	6	5	45	2
FA 70/50/40 DIN NB	70	50	40	6	5	35	2
FA 90/30/30 DIN NB	95	30	20	6	5	35	4
FA 130/30/30 DIN NB	140	30	20	6	5	35	6



**Processing:**

Cutting and Welding:

The correct welding procedure with an electrical blade or with a welding device with the corresponding cross section.

Accurately cut the sections to be connected in a sharp angle and clean them of impurities or irregularities. Make sure that the welding tool is clean and in a safe position to warm up.

The elements to be welded must be placed on a flat, stable surface.

The cut surfaces are partially pressed against the heated welding tool until a liquid mass on both sides oozes out. Then just release the pressure enough to remove the welding tool and press the seam back together until it has cooled down after about 30-60 seconds.

Ideally two people are required to perform this operation properly. While one handles the welding tool, the other presses the seams against it. The welding process should be carried out quickly and efficiently, beware not to cool the heated points before they are actually connected while an excessive or prolonged heating can lead to charring of the PVC and to a lack of bonding. PVC melts at about 120-140°C but burns to slag at about 160-180°C. According to these values, the temperature of the welding device must be appropriately set.







Before each new heating, PVC residues at the welding tip must be thoroughly cleaned. At best used for this purpose a V4A wire brush.

After the welding a joint tape sweatband with a thickness of about 1.5 mm is applied over the entire seam. The sweatband should be applied with a little pressure and then heated with a heat gun. The heat gun is to be only briefly used on the tape. This measure is used to secure the welds. Each weld is finished with an electric spark device to check for leaks.

Installation:

The *PVC WATERSTOP* ist be installed together with the reinforcement steel bars (clamps and connection wire).

The cleanliness and integrity of the *PVC WATERSTOP* shall be inspected before concrete cast.

Weldings	“T”	“X”	“L”
Flat			
Vertical			

**Safety information:**

No special measures required

**Packaging:**

all types	25m Rolls
except:	
AA50 NB, AD 50 NB, AA500 DIN, DA 500 DIN	20m Rolls
S NB	50m Rolls

**Storage:**

Shelf life at least 24 month in original packaging when stored in dry conditions between 15-25°C, protected from heat, frost and direct sunlight.

After the expiration the use of the product is generally not recommended, unless an approval has been provided by TPH. This approval can only be obtained by the quality assurance department of TPH releasing the material after verification of main properties being within specification.

**Disposal:***Recommendation:*

Small quantities of product residues can be disposed of as normal domestic waste. Dispose of bigger quantities must be effected in accordance with the corresponding local regulations.

**Test certificates:**

General Building Authority Test Certificate for PVC-P *PROOFMATE-WATERSTOPS* according factory specification NB; MPA NRW Dortmund 2015

**Legal notice:**

The correct and thus successful application of our products is not subject to our control. A guarantee can be issued for the quality of our products within the framework of our sales and supply conditions, however not for successful processing. All data and specifications in this specification sheet are based on the present state of the art and the right to changes and adaptations for the sake of development remains explicitly reserved. The consumption specifications designated by us can be only average empirical values, where deviations are possible on an individual basis and therefore cannot be excluded by us.

**TPH Bausysteme GmbH**  
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**D-22848 Norderstedt**

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