







# **Pipeline Accessories**



# **PSI** Anti-Corrosion Tapes



# **The Systems**



**PSI anti-corrosion tapes** have been specially developed for high-quality, onsite corrosion protection for joints, in



## The Systems



## Duo40 extra one-tape-system

Class C/50 according to EN 12068/ DIN 30672, four layers

DVGW-Reg.-No.: NV-5180BR0557 ÖVGW-Reg.-No.: G2.945

Duo40 extra, 2 x 50% overlap, **PSI-Primer HT extra** 

Total thickness 3,2 mm

Adhesive PE-carrier Adhesive

System for high quality coating of field-welded joints, complete pipes, bends and complicated shaped parts in all pipe diameters.

The system is suitable when high shear resistance is required. It is possible to wrap by hand, although we recommend wrapping by machine.

Duo 40 extra is a very effective asymmetric three layer anti-corrosion tape, which amalgamates to a homogeneous coating. The soft butyl rubber allows application over a wide area without leaving any gaps.

## MonoTop40 one-tape system

Class B/30 according to EN 12068/DIN 30672

DVGW-Reg.-No.: NV-5180BQ0144

MonoTop40, 1 x 50% overlap, **PSI-Primer P27** Total thickness 2.03 mm

PE backing Adhesive

System for application on field-welded joints, complete pipes, bends and complicated shaped parts up to ND 600. Because of the system's high flexibility, it is perfect for hand wrapping without a wrapping machine.

MonoTop 40 is a very strong anticorrosion tape which amalgamates to a homogeneous coating with a very flexible plastic surface.



# **Technical Data**



## **PSI Anti-Corrosion Tape**

Properties	Test specification	Duo40 extra	MonoTop40
Adhesive basis		Butyl rubber Mixture	Butyl rubber Mixture
Carrier basis		Polyethylene	Polyolefins
Colour		yellow/black	black
Total thickness		0.80 mm	1,016 mm
Adhesive thickness inside		0.57 mm	0.610 mm
Adhesive thickness outside		0.03 mm	
Carrier thickness		0.20 mm	0.406 mm
Peel strength	DIN EN 12068		70 N/10 mm
Tensile strength	DIN EN 12068	11 N/mm	
Elongation at break	DIN EN 12068	>600%	400%
core diameter		41 mm	76 mm
Adhesion			
To primed steel at 23°C	DIN EN 12068	21 N/10 mm	30 N/10 mm
To primed steel at 50°C	DIN EN 12068	3 N/10 mm	3 N/10 mm
To itself	DIN EN 12068	50 N/10mm	20 N/10mm
Electrical resistance	ASTM D 1000		40 KV/mm
Water absorption*	ASTM D 257		0,60%
Application temperature**		-35 – 70 °C	-35 – 70 °C
Operating temperature		-35 – 85 °C	-35 − 85 °C

<sup>\*</sup> Measurement on steel bonding tape \*\* Tape temperature min. 10°C



### **PSI-Primer:**

Properties	Test specification	Unit	Type PSI-HT extra	Type PSI-P27
Colour			black	black
Density	ASTM 1298	g/cm³	0.78	0.83
Solvent content	ISO 1515	%	20	27
Viscosity (4 mm needle)	ASTM D 1200	sec	50	35
Flash point	ABEL IP 170	°C	-12	-12
Consumption		I/m²	approx. 0.2 ℓ	approx. 0.2 ℓ
Application temperature		°C	-30° up to 60°	-30° up to 60°

# **Requirement Specifications**

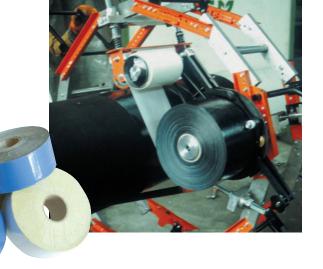


Requirement specifications for welded joints with PSI anti-corrosion tape. Calculated width 400 mm, including overlap with existing coating.

Pipe di ND m		Pipe (ISO)	Tapewidth metric	Primer- consumption per welded joint	One wra 50% ov (two la	erlap	50% o	aps with verlap ayers)
ND	inch	mm	mm	litre	meters	m²	meters	m²
25	1	33.7	30	0.01	3.05	0.09	6.10	0.18
40	1 1/2	48.3	30	0.02	4.37	0.13	8.74	0.26
50	2	60.3	30	0.02	5.46	0.16	10.91	0.33
65	2 1/2	76.1	50	0.02	4.13	0.21	8.26	0.41
80	3	88.9	50	0.03	4.83	0.24	9.65	0.48
100	4	114.3	50	0.04	6.21	0.31	12.41	0.62
150	6	168.,3	50	0.05	9.14	0.46	18.28	0.91
200	8	219.1	50	0.07	11.90	0.59	23.79	1.19
250	10	273.1	100	0.09	7.41	0.74	14.83	1.48
300	12	323.9	100	0.10	8.79	0.88	17.59	1.76
350	14	355.6	100	0.11	9.65	0.97	19.31	1.93
400	16	406.4	100	0.13	11.03	1.10	22.06	2.21
450	18	457	100	0.14	12.41	1.24	24.81	2.48
500	20	508	100	0.16	13.79	1.38	27.58	2.76
600	24	610	100	0.19	16.56	1.66	33.12	3.31
700	28	711	100	0.22	19.30	1.93	38.60	3.86
800	32	813	100	0.26	22.07	2.21	44.14	4.41
900	36	914	100	0.29	24.81	2.48	49.62	4.96
1000	40	1016	100	0.32	27.58	2.76	55.16	5.52
1100	44	1118	100	0.35	30.35	3.04	60.70	6.07
1200	48	1219	100	0.38	33.09	3.31	66.18	6.62
1300	52	1321	100	0.42	35.86	3.59	71.72	7.17
1400	56	1422	100	0.45	38.60	3.86	77.21	7.72
1500	60	1524	100	0.48	41.37	4.14	82.74	8.27
1600	64	1626	100	0.51	44.14	4.41	88.28	8.83

The above-mentioned quantities include an allowance of approx. 8%, because in practice slightly more then 50% overlap is wrapped and existing coatings with different thicknesses and diverse welded-joint systems, for example welded socket joints, are not recorded separately in this table.

The indicated primer consumption is based on average historical values and can differ according to the application method and the type of primer.



## **ALU TOP 30**



### PSI ALU TOP 30 provides protection against corrosion and UV for pipelines laid above ground.



Alu Top 30 is a high-quality, self adhesive corrosion protection tape (cold applied), based on butyl rubber with an outer layer consisting of plastic-modified aluminium. The material offers the optimum in UV protection; the tape can be slightly stretched during use without breaking the aluminium layer. The system is particularly suitable for coating entire pipe sections, bends and irregularly shaped parts and for providing protection against UV rays. Thanks to its exceptional flexibility, it is particularly suitable for application by hand. As a rule, the system is treated with primer V and is wound on with a 50% overlap.

#### Storage:

The product should be protected against direct sun exposure and should be stored with 10°C to 30°C. Rolls should be kept dry and standing on end.



iecnnicai data	PSI Alu Top 30	Test method

Mass per unit area: app. 1.9 kg/m²

Overall thickness: 1.5 mm DIN 52123

Exterior colour: Aluminium-Blank

Softening point: > 95°C DIN 52011
Cold bending process: > -40°C DIN 52123
Adherence to metal: 38 N/mm² DIN ISO 4624

Temperature resistant: -30°C – approx. +80°C

Tear strength: 29N DIN 52123

DVGW-approval no

## Butyl Bar - shapeless sealant, clay



#### **Properties:**

- self-adhesive
- can be processed manually
- soft plastic
- vibration reducing between wing parts
- free of solvent
- non-shrinking
- water-resistant and durable

#### Application:

- filler for molded parts during corrosion protection
- closing of cable and pipe penetrations, drillings und bevel
- barrier material before filling in insulating foam
- assembling aid in case of additional use of construction adhesives or mechanical fastenings

#### **Processing:**

The processing is carried out by hand. The required quantity of sealant is to be put into the desired form by hand or with a trowel at the place of installation.

#### Surface underneath:

The substrate must be clean, dry and free of dust.

## **Order Form**



To From

## PSI Products GmbH Fax +49 (0) 7473/37 81 87

Just copy form, fill out the volumes and fax to PSI

Description	Core Ø in mm	Width in mm	Length in m/Roll	pcs./ carton	Art. no.	pcs.	€/roll*	sum
DUO40 extra yellow	41	30	15	18	4-034- <b>21903</b>			
DUO40 extra yellow	41	50	15	12	4-034- <b>21904</b>			
DUO40 extra yellow	41	100	15	6	4-034- <b>21905</b>			
DUO40 extra black	41	30	15	18	4-034- <b>21900</b>			
DUO40 extra black	41	50	15	12	4-034- <b>21901</b>			
DUO40 extra black	41	100	15	6	4-034- <b>21902</b>			
DUO40 extra black	76	100	50	3	4-034- <b>21954</b>			
Mono Top40	76	30	15	40	4-034- <b>21949</b>			
Mono Top40	76	50	15	24	4-034- <b>21950</b>			
Mono Top40	76	100	15	12	4-034- <b>21951</b>			
Alu Top30	76	50	15	24	4-034- <b>21927</b>			
Alu Top30	76	100	15	12	4-034- <b>21928</b>			
			Litre/Can	kg/Can				
PSI Primer HT extra			1	1	4-034- <b>21956</b>			
PSI Primer HT extra			5	5	4-034- <b>21957</b>			
PSI Primer P27			1	1	4-034- <b>21964</b>			
PSI Primer P27			5	5	4-034- <b>21965</b>			
Wrapping machine for	tape width	up to 100	mm. for core	e 41 mm	4-034- <b>21966</b>			
Wrapping machine for	big rolls				4-034- <b>21967</b>			
Adapter for wrapping r	machine 76	mm core			4-034- <b>21969</b>			

### Butylfiller to adjust unevennesses and filling of cavities

Description	pcs./carton	Art. no.	pcs.	€/pcs*	sum
Butyl filler á 1kg	10	4-034- <b>21945</b>			

	Width	Length	pcs./ carton	Art. no.	pcs.	€/roll*	sum
ISO-Petrolatumtape PE uni							
Roll	50 mm	10 m	24	4-034- <b>21970</b>			
Roll	100 mm	10 m	12	4-034- <b>21971</b>			
Roll	200 mm	10 m	6	4-034- <b>21972</b>			
ISO-Bitumentape GG							
Roll	100 mm	10 m		4-034- <b>21980</b>			
Roll	200 mm	10 m		4-034- <b>21981</b>			
Roll	300 mm	10 m		4-034- <b>21982</b>			
						€/can*	
Primer V	51	can		4-034- <b>21986</b>			
Primer V	11	can		4-034- <b>21985</b>			
Other width on request							

<sup>\*</sup> Prices according to valid pricelist

Date/Signature

# **Application Instructions**

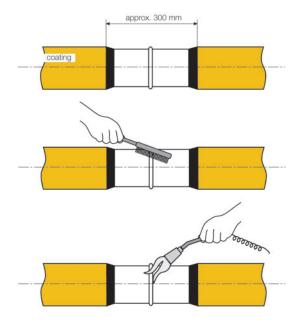


#### Cleaning:

Prepare the pipe according to DVGW-instructions GW 15: **dry**, clean, grease-free and rust-free.

Chamfer the edges of the existing coating, to guarantee that cavities are clear.

Roughen the existing coating, at least 100 mm, with an abrasive cloth.



#### **Drying**

#### Primer:

Make sure PSI-primer is well **stirred**. Primer is applied to the dried and cleaned surfaces, including at least 100 mm of the existing coating on both sides.

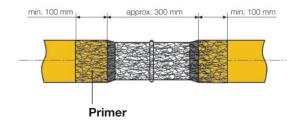
The **curing time** is approx. 10 minutes - please make a touch test to check!

When the primer has been applied for more than 4 hours, the pipe must be primed again. When the joint has been dried with a flame for a second time, the pipe must be primed again

### Tape application in general:

All tapes are applied around the pipe using a spiral wrapping under constant strong tension with at least 50% overlap. The protective foil must be removed. The existing coating must be overlapped by at least 50 mm. For systems which require a double wrap, the outside layer must extend beyond the inside layer.

Please note that the tapes, as well as the pipe surface, have a temperature of at least  $10C^{\circ}$ .

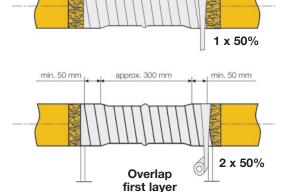


#### Application of the systems:

**Duo 40 extra:** one-tape system, class C/50, according to **PSI Primer HT extra** EN12068/DIN 30672, two layer with 50%

overlap (4 layers)

MonoTop 40: one-tape system, class B/30 acc.to EN12068/ PSI Primer P27 DIN 30672 one layer with 50% overlap (2 layers)



approx. 300 mm

## **ISO Petrolatum tape**



#### **Description:**

The PSI ISO petrolatum tape is suitable for pipeline coating. It can be used for house connections and fittings, but is particularly suitable for complicated parts such as T-pieces in connection with petrolatum filling material.

The PSI petrolatum tape can be applied directly on PE-pipes. This tape is compatible with work wrappings from PE, PP and epoxy resin.

The PSI ISO petrolatum tape is an anti-corrosion binding with a chemical-fibre base material ( $100g/m^2$ ), coated with modified petrolatum on both sides. It is highly adhesive and elastic, and has a high softening point. The PSI ISO petrolatum tape is coated with a PE foil on the out-side. This foil is a diffusion-tight mechanical protection.

### **Application instructions:**

#### Cleaning:

Prepare the pipe according to DVGW-instructions GW 15: **dry**, clean, grease-free and rust-free. The PSI ISO petrolatum tape - uni is to be used **without primer**!

#### Filler:

Fill cavities and round off sharp corners with petrolatum filler.

#### Application:

The tape should be wound on in **two layers**. We recommend that the first layer be wound on with a 50% overlap. The outer layer should be wound on in a spiral pattern with a 10 mm overlap. The joins with the existing factory coating should be included with a minimum 50 mm overlap in the winding all round. Care should be taken to ensure that the **PE backing** is on the outside. Ensure that the winding is free of puckering and air pockets.

Finally, press down the tape firmly and smooth by hand, particularly in the overlapping area. If subjected to severe mechanical loadings, the additional application of PSI fleece to protect the pipe is strongly recommended.

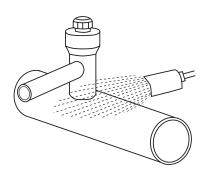


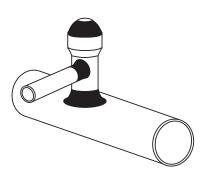
### **Technical specifications:**

Roll length: 10 m

Width: 50 100 150 200
Weight: approx. 1.0 Kg/m²
Thickness: approx. 1.5 mm
Colour: beige to brown
DVGW approval class A/30

DIN 30672/EN12068







DVGW-Reg.-No.: NG-5180BO0011

## **ISO Bitumen Tape GG**



#### **Description:**

The PSI ISO bitumen tape - GG is made for coating field-welded joints and fittings, and, in particular, for complicated parts such as flanges and T-pieces.

The PSI ISO bitumen tape GG is compatible with work wrappings like PE, PP or epoxy resin.

The PSI ISO bitumen tape - GG consists of a fibreglass base material, which is coated on both sides with modified bitumen.

The material has a PE foil on one side.

The binding is a warm-applied anti-corrosion tape with high elasticity.

### Application instructions: (example: welded joint)

#### Cleaning:

Prepare the pipe according to DVGW-instructions GW 15: **dry**, clean, grease-free and rust-free.

#### Preheating:

Heat the weld area including approx. 100 mm of the existing coating with a gentle flame up to approx. 40-50°C.

#### Primer:

Make sure V-primer is well **stirred**. Primer is applied to the dried and cleaned surfaces, including at least 100 mm of the existing coating on both sides.

The **curing time** is approx. 10 minutes - please make a touch test to check!

When the primer has been applied for more than 4 hours, the pipe must be primed again. When the joint has been dried with a flame for a second time, the pipe must be primed again.

#### Tape application:

ISO GG bitumen tape is applied to form a sleeve (strips) with the backing strip facing **outwards**.

The tape should be cut into lengths equivalent to the **circumference of the pipe plus 30 mm**. It is heated with a propane gas flame on the inside until the bitumen flows. It is then applied to the preheated surface under tension and free of puckering, and pressed well down. In the overlapping areas (30 mm from layer to layer), **the backing must be burned off beforehand**. After the strips have been applied, the overlapping areas **should be heated again and smoothed with a spatula**.



### **Technical specifications:**

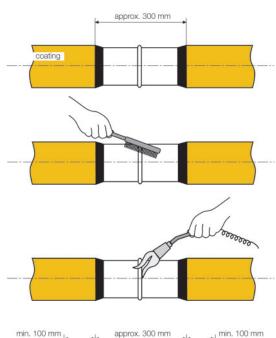
Roll length: 10 m

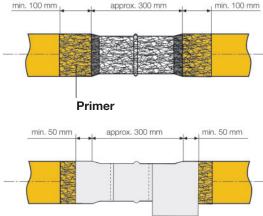
Width: 100 200 300 500

(special width available)

Thickness: minimum 4 mm DVGW approval class B/30

DIN 30672/EN12068







DVGW-Reg.-No.: NG-5180AR0826

### **Corrosion Protection Tape PSI-Flex**

## **Product Datasheet**



# Corrosion Protection Tape PSI-Flex for irregularly shaped parts

This tape was specially developed to provide effective corrosion protection for irregularly shaped steel pipeline components, such as T-joints and weld-on T-joints.

PSI-Flex can be applied cold, but pipe preparation must be carried out in accordance with DVGW notice GW 15. The tape stands out by virtue of its exceptional flexibility, particularly on edges and in corners. It can be lightly stretched and is resistant to acids and bases, fungi and microorganisms.

No primer is required. The tape is selfsealing and presses firmly against the substrate due to the high restoring force of the PE layer, which also serves as a vapour barrier. It should be applied with a 50% overlap minimum.



Туре	Widthness	Roll-length	Art. no.	Unit
Corrosion Protection Tape PSI-Flex 50-5 Corrosion Protection Tape PSI-Flex 100-5	50 mm 100 mm	5 Meters 5 Meters	4-034-21001 4-034-21002	24 pcs. 12 pcs.
Filler 3.5 mm	50 mm	7.5 Meters	4-015-21498	24 pcs.

#### **Technical Data**

Inner layer Butyl

Outer layer Polyethylenefoil app. 80  $\mu$ 

Application +5°C up to +40°C temperature

Electrical resistance 15 kV/mm

For continuous

operating temp. from -30°C till +80°C

Elongation at break > 300%

Overall single

layer thickness approx. 1.5 mm

Color aluminiumgrey

## **Corrosion Protection Tape PSI-Flex**

## **Application Instruction**



# Outer-wrap for irregular shaped pipeline components such as T-joints, weld-on T-joints or pipe bends.

#### Cleaning

Prepare the pipe in accordance with DVGW worksheet GW 15, removing rust, grease and dirt (wire brush, PE cleaning fluid).

#### Drying:

Dry the area to be wrapped by heating to approx. 50°C.

Caution: PSI Flex is used without any primer.

#### Filler:

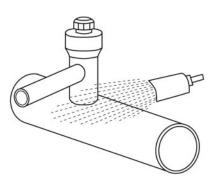
Work filler into acute angles and cavities and round off. Finally, heat and smooth the filler.

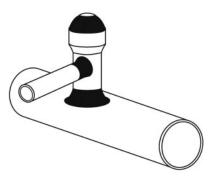
#### Installing:

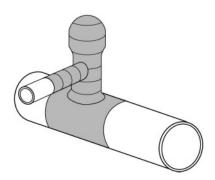
After removing the protective liner, wind PSI Flex tautly onto the pipe, taking care not to overstretch it. Press it down with the thumbs in right angles.

**For two-layer wrapping,** a winding with at least 50% overlap is required. 50 mm overlap to the mill coating is required.

The work can be considered completed when the tape is secured free of bubbles and all the required overlaps have been observed. We expressly exclude any other use of the material. The PSI guarantee is restricted to faulty material. The suitability of the product for a special purpose must be tested by the user on his own responsibility.







## **PSI Corrosion Protection Tapes**

## **Certificates**





Technische Daten technical data Belastungsklasse: B Dauerbetriebstemperatur: +30 °C Normbezeichnung: Umhüllung EN 12088-B 30 bzw. DIN 2042-0.8-2

Verwendungshinweise / Bemerkungen hints of utilization / remarks Verarbeitung: warm zu verarbeitendes Korrosionsschutzband mit ISO-Voranstrich V

A-2/2

NV-5180BS0234



type to	echnical data	remarks
HT Extra D	letastungsklasse; C lauerbetriebstemperatur; bis +50 °C lormbezeichnung: Umhülfung EN 12068-C 50 bzw. DIN 0672-C 50	44
Verwendungshinweise / Be hints of utilization / remarks Verarbeitung: kalt zu verarbeiter Verträglichkeit: Polyethylen (PE)	emerkungen ndes Korrosionsschutzband in 4 Lagen auf Primer 16 H )- und Epoxid (EP)-Werksumhüllung	T Extra aufzubringen
		20

### **PSI Corrosion Protection Tapes**

## **Certificates**



DVGW



Typ Technische Daten type technical data technical data Primer FP P 27; MonoTop 40 Belastungsklasse: B Dauerbetriebstemperatur: max. +30 °C

Verwendungshinweise / Bemerkungen hints of utilization / remarks Normbezeichnung: Umhüllung EN 12068-B 30 bzw. DIN 30672-B 30 Verarbeitung: 1-tache Wicklung mit 50% (Deerlappung © Lagen) kalt auf geprimertem Untergrund aufzubringen

Bemerkungen remarks



Verwendungshinweise / Bemerkungen hints of utilization / remarks Verarbeitung: kait zu verarbeitendes Korrosionsschutzband, Wicklung mit 50 % Überlappung (2 Lagen)

DIN DVGW CERT