

# COVALENCE® WATERWRAP-WAB

## Product Information

WaterWrap-WAB with PCI (Permanent Change Indicator) is a 2-layer field-joint coating system designed for corrosion protection of buried large diameter water pipelines operating at ambient temperature.

**Product description:** Covalence® WaterWrap is a wrap-around heat-shrinkable, ready-to-fit assembly for the corrosion protection of field girth weld joints in water distribution and transmission systems. WaterWrap is compatible with standard pipe coatings WaterWrap can also be used for coating bare, replacement pipe sections and large radius bends. WaterWrap is designed to be applied with a minimum preheat and is ideal for large diameter steel water pipe projects utilizing the internal welding, **Weld-After-Backfill (WAB)** process.

Construction: Two-layer system

- **First layer:** Visco-elastic low preheat adhesive sealant.
- **Second layer:** Thick-walled, radiation-cross-linked, high density polyethylene with PCI (Permanent Change Indicator).

The installation is carried out directly on the cleaned and dried (pre-heated) pipe surface. The use of the 939-HT filler is required when the step down on the weld bead is  $\geq 1/4"$ . The filler 939-HT is a thick mastic-like butyl rubber designed to fill and smooth transition areas. The semi-tacky composition remains flexible and easily molded in place to conform around irregular shapes. During installation, the heat-shrinkable sleeve is wrapped around the pipe and heat is applied. The heat activated backing contracts to form a tight fit around the joint eliminating entrapped air and filling the smallest of crevices with a high quality, corrosion inhibiting Visco-elastic adhesive sealant. The permanently cross-linked polyolefin outer layer forms a tough barrier against mechanical damage and moisture.

### Features:

- Contains no asphalt.
- Offers two Permanent Change Indicators (PCI).
- High modulus of elasticity backing.
- High impact and penetration resistance.
- High shrink force.
- Low application preheat.
- No special equipment or skills required.

### Benefits:

- Does not off-gas toxic vapors. Safe to use.
- Underheat Indicator – ensures correct application heat to entire sleeve
- Overheat Indicator – ensures no excess heat
- Result – reliable installation and full inspectability at any time after installation.
- Greater soil stress resistance. Better overall performance.
- Tough, but flexible throughout.
- Optimizes flow & fill of visco-elastic adhesive sealant. Greater, long term protection.
- Makes installation fast and easy. Keeps installation costs low.
- Easy to install. Saves time.

## Product selection guide

<b>Max operating temperature</b>	50°C (122°F).
<b>Compatible line coatings</b>	PE, PU, FBE, PP, Coal Tar, Tape & Asphalt
<b>Min. preheat temperature</b>	20°C (68°F)
<b>Recommended pipe preparation</b>	SP2 or SP3 Ref. AWWA C216
<b>Performance</b>	AWWA C216

## Product properties

Backing		
Property	Test method	Typical value
<b>Tensile strength at break</b>	ASTM D-638	3300 psi (22.8 MPa)
<b>Elongation at break</b>	ASTM D-638	600%
<b>Hardness, Shore D</b>	ASTM D-2240	55
<b>Shrink force</b>	ASTM D-638 150°C (302°F)	40 psi
<b>Dielectric strength</b>	ASTM D-149	900 V/mil (35 kV/mm)
<b>Water absorption</b>	ASTM D-570 23°C (73°F) 24 hr	0.04%
Adhesive		
Property	Test method	Typical value
<b>Softening point</b>	ASTM E-28	>205°C (401°F)
<b>Lap shear</b>	ASTM D-1002 EN 12068 @ 10 mm (0.4")/min	> 18 psi > 0.05 N/mm <sup>2</sup>
Installed sleeve		
Property	Test method	Typical value
<b>Peel to steel</b>	ASTM D-1000 EN12068 @ 10 mm (0.4")/min	> 20 pli > 0.4 N/mm
<b>Cathodic disbondment</b>	ASTM G-8, 30 days	<10 mm
<b>Impact resistance</b>	ASTM G-14 EN12068	70 in lbf >8 J for /B >15 J for /C
<b>Penetration resistance</b>	ASTM G-17 EN12068, Class B30 & C30	Pass, no holiday with 12.5 kV detector. 0.80-1.05 mm (0.032-0.041") residual thickness

Note: The typical values in this data sheet are based on lab prepared samples. Values shown are not to be interpreted as product specifications.

Product thickness	/1-2
<b>Backing thickness as supplied</b>	0.7 mm (0.028 in)
<b>Backing fully free recovered</b>	1.0 mm (0.039 in)
<b>Adhesive thickness as supplied</b>	2.0 mm (0.079 in)
<b>Sleeve % recovery</b>	28 %

**Ordering information**

Covalence® WaterWrap WAB type product is available

- As Uni-sleeve (pre-cut sleeve with pre-attached closure patch)
- As a roll (closure patches to be ordered separately)

Select sleeve width that will overlap onto the mill-applied coating by 2 inches (50 mm) minimum on each side of the weld joint. Take a 5% shrinkage during installation of sleeve width into account when calculating the minimum sleeve width.

**Cut piece/Uni-sleeve**

**Example WaterWrap-56000X18/1-2/UNI**

	Designation	Standard ordering options
<b>56000</b>	Outside pipe diameter (mils)	Up to 144" (DN3600). Larger diameters available on request.
<b>18</b>	Sleeve width (in)	12 (12.25" or 311 mm) 18 ( 18.25" or 463 mm)* 24 (23.625" or 600 mm)* 30 (30.25 or 768 mm)* 36 (36.25 or 920 mm)* <i>* Nominal width</i> Other widths available on request, minimum order quantities apply.
<b>/1-2</b>	Product thickness construction	/1-2
<b>/UNI</b>	Designates pre-attached closure patch	

**Roll form (closure patches to be ordered separately)**

**Example WaterWrap-18X100/1-2-RL**

	Designation	Standard ordering options
<b>18</b>	Sleeve width (in)	18 (457 mm)* 20 (508 mm)* 24 (609 mm)* 30 (762 mm)* 36 (914 mm)* <i>* Minimum width</i> Other widths available on request, minimum order quantities apply.
<b>100</b>	Roll length (ft)	100 ft (30 m) 10% of supplied rolls can have max 1 splice.
<b>/1-2</b>	Product thickness construction	/1-2

**Closure patches**

**Example WPCP-IV-4X18**

<b>4</b>	Closure patch width (in)	4 (100 mm), 6 (150 mm), 8 (200 mm)
<b>18</b>	Closure patch length (in)	Same as sleeve width: 18 ( 457 mm)* 20 (508 mm)* 24 (609 mm)* 30 (762 mm)* 36 (914 mm)* <i>* Minimum length</i>

**General order information**

<b>Product dimension</b>	Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see latest application table AT-WATERWRAP
<b>Additional filler</b>	Covalence 939-HT filler should be used when the step down on the weld bead is $\geq 1/4"$ , see 939-HT product datasheet for more information.
<b>Installation guide</b>	For proper product installation, see latest application guideline.
<b>Handling</b>	Handle with care. Keep boxes upright.
<b>Storage</b>	Store indoor, clean and dry, away from direct sunlight in a cool place below +50°C. Unlimited shelf life.

**Information**

<b>Documentation</b>	Extensive information is available on our web-site. Application instructions and other documentation can be obtained by contacting our head office, from our local distributor or by sending an email to <a href="mailto:info@sealforlife.com">info@sealforlife.com</a>
<b>Certified staff</b>	Application of the described coating system shall be carried out by certified personnel.



**SEALFORLIFE**  
Industries

Seal For Life Industries Mexico S de R.L. de C.V.  
Tijuana, Mexico  
USA Tel: +1 858 633 9797  
Mx Tel: +52 664 647 4397  
[mexico@sealforlife.com](mailto:mexico@sealforlife.com)

Seal For Life Industries - Stopaq B.V.  
Stadskanaal, the Netherlands  
Tel: +31 599 696 170  
Fax: +31 599 696 177  
[info@sealforlife.com](mailto:info@sealforlife.com)

Seal For Life Industries BVBA  
Westerlo, Belgium  
Tel: +32 14 722 500  
Fax: +32 14 722 570  
[belgium@sealforlife.com](mailto:belgium@sealforlife.com)

Seal For Life India Pr  
Baroda, Indi  
Tel: +91 2667 26-  
Fax: +91 2667 26  
[india@sealforlife.com](mailto:india@sealforlife.com)

DISCLAIMER: Seal For Life Industries warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Seal For Life Industries' written instructions. Many installation factors are beyond the control of Seal For Life Industries, the user shall determine the suitability of the products for the intended uses and assume all risks and liabilities in connection herewith. Seal For Life's liability is stated in its General Conditions of Sale. Seal For Life Industries makes no other warranty either express or implied. All information contained in this document is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous sheets on this product.