

COVALENCE[®] WATERWRAP

Product Information

WaterWrap 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 preheating and is ideal for large diameter pipe.

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

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

Product properties

Backing		
Property	Test method	Typical value
Tensile strength at break	ASTM D-638	3300 psi (22.8 MPa)
Elongation at break	ASTM D-638	600%
Hardness, Shore D	ASTM D-2240	55
Shrink force	ASTM D-638 150°C (302°F)	40 psi
Dielectric strength	ASTM D-149	900 V/mil (35 kV/mm)
Water absorption	ASTM D-570 23°C (73°F) 24 hr	0.04%
Adhesive		
Property	Test method	Typical value
Softening point	ASTM E-28	>205°C (401°F)
Lap shear	ASTM D-1002 EN 12068 @ 10 mm (0.4")/min	> 18 psi > 0.05 N/mm ²
Installed sleeve		
Property	Test method	Typical value
Peel to steel	ASTM D-1000 EN12068 @ 10 mm (0.4")/min	> 20 pli > 0.4 N/mm
Cathodic disbondment	ASTM G-8, 30 days	<10 mm
Impact resistance	ASTM G-14 EN12068	70 in lbf >8 J for /B >15 J for /C
Penetration resistance	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	/B	/1-2
Backing thickness as supplied	0.7 mm (0.028 in)	0.7 mm (0.028 in)
Backing fully free recovered	1.0 mm (0.039 in)	1.0 mm (0.039 in)
Adhesive thickness as supplied	1.5 mm (0.060 in)	2.0 mm (0.079 in)
Sleeve % recovery	28 %	28 %

Ordering information		
Covalence® WaterWrap 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/B/UNI	
	Designation	Standard ordering options
56000	Outside pipe diameter (mils)	Up to 144" (DN3600). Larger diameters available on request.
18	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)* * Nominal width Other widths available on request, minimum order quantities apply.
/B	Product thickness construction	/B, /1-2
/UNI	Designates pre-attached closure patch	
Roll form (closure patches to be ordered separately)		
Example	WaterWrap-18X100/B-RL	
	Designation	Standard ordering options
18	Sleeve width (in)	18 (457 mm)* 20 (508 mm)* 24 (609 mm)* 30 (762 mm)* 36 (914 mm)* * Minimum width Other widths available on request, minimum order quantities apply.
100	Roll length (ft)	100 ft (30 m) 10% of supplied rolls can have max 1 splice.
Closure patches		
Example	WPCP-IV-4X18	
4	Closure patch width (in)	4 (100 mm), 6 (150 mm), 8 (200 mm)
18	Closure patch length (in)	Same as sleeve width: 18 (457 mm)* 20 (508 mm)* 24 (609 mm)* 30 (762 mm)* 36 (914 mm)* * Minimum length

General order information	
Product dimension	Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see latest application table AT-WATERWRAP
Installation guide	For proper product installation, see latest application guideline.
Handling	Handle with care. Keep boxes upright.
Storage	Store indoor, clean and dry, away from direct sunlight in a cool place below +50°C. Unlimited shelf life.

Information	
Documentation	Extensive information is available on our website. Application instructions and other documentation can be obtained by contacting our head office, from our local distributor or by sending an email to info@sealforlife.com
Certified staff	Application of the described coating system shall be carried out by certified personnel.



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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 prior sheets on this product.