

# COVALENCE<sup>®</sup> FLEXCLAD-II

## Product Information

**Product description:** Covalence<sup>®</sup> FLEXCLAD –II tapes are stretchable, hand-wrapped, heat-shrinkable tapes used for corrosion protection of pipe bends and also for small diameter straight pipes in distribution networks.

Construction: Multi wrap construction:

- **Adhesive:** High-Shear strength copolymer adhesive).
- **Backing:** Flexible, radiation cross-linked, low density polyethylene.

The installation is carried out directly on the cleaned and prepared pipe surface without any primer. During installation, FLEXCLAD-II is to be wrapped spirally around the bend with a 50% overlap. The carrier is heated and shrinks tightly around the substrate; at the same time, the sealing adhesive melts and is forced into all surface irregularities, forming a thorough coating and a complete bond with the substrate.

### Features:

- Different mechanical classes.
- Highly flexible.
- Compatible with varying pipe diameters.
- Self-tensioning, heat-shrinkable backing.
- No special equipment required.

### Benefits:

- Provides options to the customer and allows cost savings.
- Easy to apply at both low or high temperatures & on pipes of small diameter.
- Minimizes inventory, thus saving money.
- Easy to use. Saves time.
- Keep installation costs low.

## Product properties

### Backing

Property	Test method	Typical value
<b>Tensile strength at break</b>	ASTM D-638	22 MPa
<b>Elongation at break</b>	ASTM D-638	900%

### Adhesive

Property	Test method	Typical value
<b>Softening point</b>	ASTM E-28	94°C (201°F)
<b>Shear strength</b>	EN 12068 @ 10 mm/min	1.20 N/mm <sup>2</sup>

### Installed sleeve

Property	Test method	Typical value
<b>Peel to steel</b>	EN 12068 @ 10 mm/min	7.6 N/mm 1.3 N/mm at 50°C (122°F)
<b>Cathodic disbondment</b>	EN 12068 30 days	11 mm radius ≤ 20 mm radius at 50°C (122°F)
<b>Impact resistance</b>	EN 12068 Class C	> 15 J <sup>(2)</sup>
<b>Indentation resistance</b>	EN 12068 Class C (>10N/mm <sup>2</sup> )	> 0.6 mm <sup>(2) (3)</sup>

(1) 50 % overlap

(2) 2 X 50% overlap

(3) Remaining coating 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

	FLEXCLAD-II-C30
<b>Backing as supplied</b>	0.5 mm (0.020 in)
<b>Adhesive as supplied</b>	0.7 mm (0.028 in)

## Product selection guide

	FLEXCLAD-II-C30
<b>Max operating temperature</b>	50°C (185°F).
<b>Compatible line coatings</b>	PE, FBE, Tape & Coal Tar
<b>Min. preheat temperature</b>	90°C (194°F)
<b>Recommended pipe preparation</b>	ST3 or SA2½
<b>Soil stress restrictions</b>	None
<b>Performance</b>	EN 12068 C30

## General order information (continued)

<b>Installation guide</b>	For proper product installation, see latest installation instruction.
<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 website. 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 should be carried out by certified personnel.

## General order information

Covalence<sup>®</sup> FLEXCLAD type products are available – As a roll (closure patches included)

Example	FLEXCLAD-II-C30-50X15000	
	Designation	Standard ordering options
<b>50</b>	Roll width (mm)	35 mm (1.5"), 50 mm (2.0"), 75 mm (3.0"), 100 mm (4")
<b>15000</b>	Roll length (mm)	15000 mm = 15 m (50 ft)

### Calculated material usage

(including 50 mm overlap on the mill-applied coating)

Pipe diameter	Recommended tape width (mm)	3 D-Bend		5 D-Bend	
		Tape length FLEXCLAD-II (m)	Tape length FLEXCLAD-II (m)	Tape length FLEXCLAD-II (m)	Tape length FLEXCLAD-II (m)
DN 25	35	3.10	3.40	3.40	3.40
DN 40	35	4.80	5.40	5.40	5.40
DN 50	35	6.30	7.30	7.30	7.30
DN 80	50	7.50	9.00	9.00	9.00
DN 100	50	10.60	13.20	13.20	13.20
DN 125	50	14.50	18.50	18.50	18.50
DN 150	50	18.80	24.40	24.40	24.40
DN 200	75	19.10	25.40	25.40	25.40
DN 250	75	27.20	37.00	37.00	37.00
DN 300	100	27.30	37.60	37.60	37.60

Note: For pipe sizes exceeding DN 300, the use of MEPS, WPC or HTLP is recommended.



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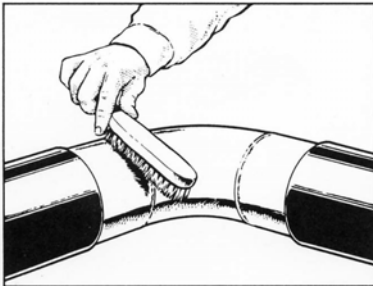
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## Installation Instructions

### Installation procedure

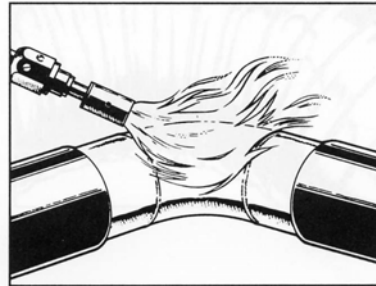
#### 1. Cleaning



The exposed steel should be cleaned to SIS 05-ST2 or equivalent surface preparation.

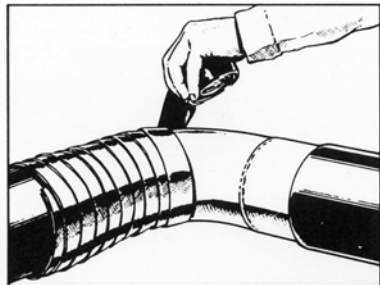
The steel and adjacent pipe coating should be free of all foreign materials such as dirt, rust, oil, grease and moisture prior to installation.  
No primer is needed with FlexClad tape.

#### 2. Preheating



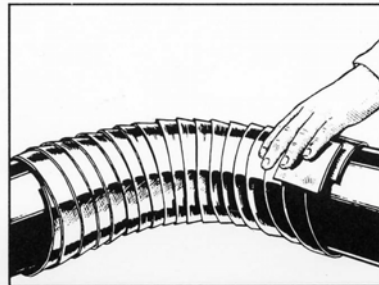
Preheat the joint area to 60°C and the adjacent coating to 60°C, using a propane torch, type Raychem FH 2601 or equivalent.  
Verify the temperature with tempil sticks, contact pyrometers or equivalent.

#### 3. Positioning FlexClad



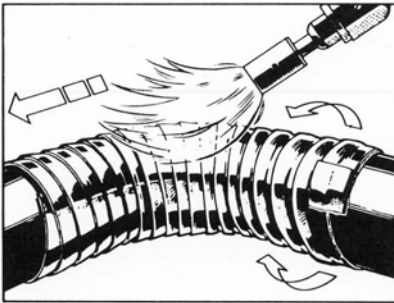
Pull the appropriate length of FlexClad out of the box, whereby the release paper will be removed.

Position the tape with at least one complete wrap onto the pipe coating. The tape should be overlapped onto itself with a minimum of 15mm (.03").



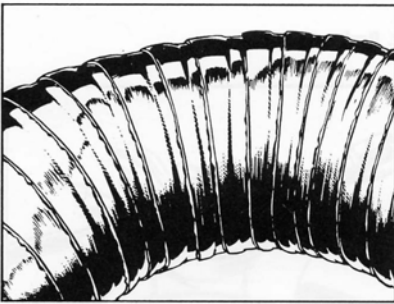
Wrap the tape tightly around the bend until the bend is completely covered, assuring a minimum overlap for each wrap. The tape should extend onto the other side of the pipe coating with at least one complete wrap. The tape end should be fixed with a CLR closure.

#### 4. Heating of FlexClad tape



Adjust the torch to produce a steady yellow flame.  
Slightly heat the tape surface with the yellow portion of the flame, starting at the last wrap. Move the torch spirally around the bend to assure equal heating of the tape, until adhesive flow becomes evident at each overlap.

#### 5. Inspection



The tape surface should be smooth and without any entrapment of foreign material.  
The adhesive shall be visible at the tape sides and at each overlap.  
The integrity of the installed product can be checked with a holiday detector (15kV with 15 mm (.03") overlap, or 20kV max. when a 50% overlap is used).

Berry Plastics 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 Berry Plastics written instructions. Since many installation factors are beyond the control of Berry Plastics, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Berry Plastics liability is stated in the standard terms and conditions of sale. Berry Plastics makes no other warranty either expressed or implied. All information contained in this technical data sheet is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.



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