

COVALENCE[®] RAYJOINT

Product Information

The ALL-in-ONE highest performance, cost-effective solution for jacket continuation of pre-insulated pipe systems.

Product description: Covalence[®] RayJoint is a cross-linked, heat-shrinkable, tubular, all-in-one joint with superior performance. It is a complete system offering both casing pipe continuation and permanent sealing of the joint area. RayJoint is available standard for all common pipe diameters of pre-insulated pipes.

Construction: Thick wall, oversized casing & separate mastic strip sealant:

- **Adhesive:** Fiber reinforced, elastomeric mastic sealant.
- **Backing:** Heat-shrinkable, thick wall, radiation cross-linked, high

During installation, the RayJoint ends will shrink down. The mastic sealant underneath the RayJoint ends melts and fills all surface irregularities of the pipe. A water-tight bond is formed between the RayJoint casing and the pipe. After pressure testing the joint area is foamed. The foaming holes are permanently closed with specially designed double scaling FOPS-II plug system.

Features:

- All-in-one casing requiring no additional end seals.
- Excellent thermal stability for storage and transport.
- Separately-packaged fiber reinforced sealant mastic strips.
- Thick wall cross-linked PE construction with increased wall thickness for bigger diameter.
- No special installation equipment needed.
- Pressure testable prior to foam injection.

Benefits:

- Saves installation steps and material, thus saving time and money.
- Easily survives demanding conditions including high temperatures. Very user-friendly & requires no special protection in the field.
- Prevents contamination of the adhesive bond line. Assures water-tight bond.
- Resists adverse conditions: chemical, abrasive, heat, mechanical stress. RayJoint is tough and won't be damaged by application heat.
- Cost-effective, can be installed by all trained personnel.
- Assures reliability and optimum performance.

Product selection guide

Max operating temperature	50°C (60°C under expansion cushion)
Type joint	All-in-one joint
Min. preheat temperature	30-40°C
Recommended pipe preparation	Solvent Cleaning & Abrading
Soil stress restrictions	None
Pressure test after installation	Yes
Product recommended for	Main lines, distribution, service lines
Performance	>1000 cycles, 8.0% sand humidity >100 cycles, 0.5% sand humidity EN489

Product properties

Backing

Property	Test method	Typical value
Tensile strength at break	ASTM D638	25 MPa @ 23°C 40 MPa @ -40°C
Elongation at break	ASTM D638	660% @ 23°C 400% @ -40°C
Hardness, Shore D	ASTM D2240	58
Shrink force	ASTM D638, 150°C	40 psi
Thermal ageing	ASTM D3045, 150°C, 168 hr	
Followed by elongation	ASTM D638, 23°C	590%
Stress Cracking Resistance	ASTM D1693, 50°C, 10% Igepal CO630	Min 200 hrs

Adhesive

Property	Test method	Typical value
Softening point	ASTM E28	135°C
Lap shear	ASTM D1002, 2"/min	50 psi

Casing

Property	Test method	Typical value
Soil stress resistance	EN489 0.5% sand humidity 8.0% sand humidity	Min.100 cycles Min.1000 cycles
Tightness Internal pressure	TS-RAYJOINT * <40°C, 0.5 bar, 10 min	Pass
External pressure	23°C, 0.7 bar, 24 hrs	Pass
Relative outer casing movement	TS-RAYJOINT * 10 cycles of 20 mm stroke	Pass
Low temperature impact	TS-RAYJOINT * @ -25°C, 4 hr, 1 kg at 1 m height, Ø 22 mm	Pass

* Covalence Technical Specification.

Note: The typical values in this data sheet are based on lab prepared samples. For project specific requirements please consult your local SFL representative.

Product thickness

Backing as supplied (increasing with pipe diameter)	2.4-12.0 mm
Backing fully free recovered (increasing with pipe diameter)	3.0-15.0 mm
Elastomeric sealant as supplied	1.6 mm

Ordering information		
Covalence® RayJoint type products are available – As ready-to-size casing & separate joint sealings		
Example	RAYJOINT-160	
	Designation	Standard ordering options
160	Casing pipe diameter	∅ 90 (3.54") - ∅ 1200 (47.24") *
		* nominal width
Accessories (to be ordered separately)		
	Designation	Standard ordering options
S1113-100X 25000-DR-RL	Mastic sealant	100 mm wide, 25 m long
EQ-RJ-SPACER	Foam spacer to centre RayJoint	4 pc/RayJoint ≥ ∅ 900
EQ-HEAT-SHIELD-150X3X25 m	Heat protection sheet	Overheat prevention of casing pipe & RayJoint
FOPS-100 (C100)	Foaming hole patch	2 pc/RayJoint, packed per 100
Stopaq Paste CZH	Foaming hole filler	2kg sheet, 6 pc/box

General information	
Product dimension	Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see latest application table AT-GIRTHWELD.
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.
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 email to info@sealforlife.com
Certified staff	Application of the described coating system shall be carried out by certified personnel.

For proper product selection, see latest application table.



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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. Because 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 Terms and Conditions of Sale. Seal For Life Industries makes no other warranty either express 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. Seal For Life Industries is a registered marks of the Berry Global Group, Inc. or its affiliates.

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