

# RayJoint Fully Cross-Linked Heat-Shrinkable Casing

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



## Product description

### RAYJOINT jointing & sealing of pre-insulated pipe:

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

**Adhesive:** Fiber reinforced, elastomeric mastic sealant.

**Backing:** Heat-shrinkable, thick wall, radiation cross-linked, high density polyethylene.

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.

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.

## Product features/benefits

- **All-in-one casing requiring no additional end seals**  
Saves installation steps and materials, thus saving time and money.
- **Excellent thermal stability for storage and transport**  
Easily survives demanding conditions including high temperatures. Very user-friendly & requires no special protection in the field.
- **Separately-packaged fiber reinforced sealant mastic strips**  
Prevents contamination of the adhesive bond line. Assures water-tight bond.
- **Thick wall cross-linked PE construction with increased wall thickness for bigger diameter**  
Resists adverse conditions: Chemical, abrasive, heat, mechanical stress. RayJoint is tough and won't be damaged by application heat.
- **No special installation equipment needed**  
Cost-effective, can be installed by all trained personnel.
- **Pressure testable prior to foam injection**  
Assures reliability and optimum performance.

## Product selection guide

	RayJoint
<b>Max operating temperature</b>	50°C (122°F), (60°C (140°F) under expansion cushion)
<b>Type joint</b>	All-in-one joint
<b>Min preheat temperature</b>	30-40°C (86-104°F)
<b>Recommended pipe preparation</b>	Solvent Cleaning & Abrading
<b>Soil stress restrictions</b>	None
<b>Pressure testing after installation</b>	Yes
<b>Product recommended for</b>	Main lines, Distribution, Service lines
<b>Performance</b>	> 1000 cycles, 8.0% sand humidity FFI > 100 cycles, 0.5% sand humidity EN 489

## Product thickness

	RayJoint
<b>Backing (as supplied) (Increasing with pipe diameter)</b>	2.4 - 12.0 mm <b>0.095 - 0.472 in.</b>
<b>Backing (fully free recovered) (Increasing with pipe diameter)</b>	3.0 - 15.0 mm <b>0.118 - 0.591 in.</b>
<b>Elastomeric sealant (as supplied)</b>	1.6 mm <b>0.063 in.</b>

## Product properties: RayJoint (1)

Property	Test method	Typical Value
<b>Backing</b>		
Tensile strength	ASTM D-638	25 MPa @ 23°C (73°F) 40 MPa @ -40°C (-40°F)
Elongation	ASTM D-638	660% @ 23°C (73°F) 400% @ -40°C (-40°F)
Hardness, Shore D	ASTM D-2240	67
Shrink force	ASTM D-638, 150°C (302°F)	40 psi
Thermal ageing	ASTM D-3045 150°C (302°F), 168 hrs.	
Followed by elongation	ASTM D-638 23°C (73°F)	640%
Weathering (UV) resistance	ASTM D-2565, 30 days	
Followed by elongation	ASTM D-638, 23°C (73°F)	570%
<b>Adhesive</b>		
Softening point	ASTM E-28	144°C (291°F)
Peel strength	ASTM D-1000	50 pli / 87.5 N/cm

## Product properties: RayJoint (2)

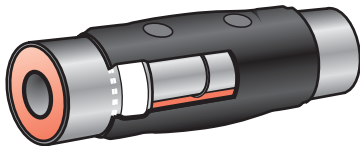
Property	Test method	Typical Value
<b>Casing</b>		
Soil stress resistance	EN 489	
	0.5% sand humidity	min 100 cycles
	8.0% sand humidity	min 1000 cycles
Tightness	EN 489	
Internal pressure	< 40°C (104°F), 0.5 bar, 10 min.	Pass
External pressure	23°C (73°F), 0.7 bar, 24 hrs.	Pass
Relative outer casing movement	RUD 6097*	Pass
	20 cycles of 20 mm (0.75") stroke	
Low temperature impact	RUD 6097*	Pass
	@ -25°C (-13°F), 4 hrs	
	1 kg at 1 m height, Ø22 mm	
Premature shrinkage	RUD 6097*	Pass
	@ 90°C (194°F), 30 days	
Temperature cycling	Internal	
	-30°C (-22°F) to 70°C (158°F), 28 days	Pass

\* Berry Plastics CPG technical specification

## Ordering information

### RayJoint type products are available:

- as ready-to-size casing & separate joint sealings



### Example: RAYJOINT-160

		Standard Ordering options
160	Nominal casing pipe diameter	Ø90 (3.54") - Ø1200 (47.24")

### Accessories (to be ordered separately)

		Standard Ordering options
S1113-120x1.6x25000-RL	Mastic sealant	25 m (82 ft)
EQ-RJ-SPACER	Foam spacer to centre RayJoint	4 pc / RayJoint ≥ Ø900 (35.43")
EQ-HEAT-SHIELD-150x3x25M	Heat protection sheet	Overheat prevention of casing pipe & RayJoint
FOPS-100 (C100)	Foaming hole patch	2 pc / RayJoint, packed per 100
FOPS-II-PLUG (S100)	Foaming hole plug	2 pc / RayJoint, packed per 100

For proper product selection, latest application table.  
For proper product installation, see latest installation instruction.



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