

COVALENCE® GDAC

Product Information

Product description: Covalence® GDAC, kit providing waterproof seal of dielectric joints, which comprises:

- Central: n.1 or 2 heat-shrinkable sleeves + pre-attached closure patches
- Sides: n.2 heat shrinkable sleeves + pre-attached closure patches
- filler mastic in bars or rolls

Heat Shrinkable sleeve Construction: Two-layer system:

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

Additional component: high viscosity sealant-based filler material

GDAC kit comprises a heat-shrinkable, wrap-around sleeve, especially developed for dielectric joints in gas networks.

The special adhesive inside the GDAC sleeve assures an excellent bond between the sleeve and bare or pre-coated pipes and joints.

The crosslinked HDPE backing gives the GDAC sleeve a high mechanical resistance as well as a high recovery capacity.

In addition to the GDAC sleeve, filler mastic is supplied which provides a smooth step-down in the transition area to ensure a tight closure and enhances the mechanical strength.

GDAC is installed using standard gas torches. After pipe surface preparation and preheating, the heat-shrinkable sleeve is wrapped around the joint. The sleeve is closed with a glass fiber reinforced closure patch, forming a tube, and shrunk in place tightly fitting around the substrate.

During recovery, the adhesive softens and flows to form a tight bond. The bond strength builds up during cool down and is fully retained after completion of the job.

Features:

- Conforms to joint-to-pipe transitions.
- Resists a wide range of environmental and mechanical forces.
- Specially formulated sealant
- Sealing adhesive automatically flows and repairs minor mechanical damages (self-healing effect)
- No special equipment (standard gas torch & a roller).
- Dimpled backing provides a "permanent change" indicator for application of heat.

Benefits:

- Provides high mechanical resistance and high recovery capacity.
- Reliable, moisture-proof seal.
- Ensures a strong bond & tight seal to virtually any substrate. Maintains its elasticity and sealing characteristics over a wide temperature range.
- No shelf life issues.
- Tough, but flexible even at low temperatures!
- Makes installation fast and easy. Keeps installation costs low.
- Dimpled backing allows easy post-heat inspection and offers a reliable check of a proper application at any time.

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	57
Density	ASTM D-792	0.97 kg/dm ³
Shrink force @150°C	ASTM D-638	40 psi (0,28 MPa)
Dielectric Strength	ASTM D-149	900 volts/mil (35 kV/mm)
Moisture absorption	ASTM D-570	0.04%

Adhesive

Property	Test method	Typical value
Softening Point	ASTM E-28	134°C
Lap shear @ 50°C	EN12068	> 0,1 N/mm ²

Installed sleeve

Property	Test method	Typical value
Peel to Steel @10 mm/min	EN12068	1.1 N/mm @ 23 °C
Cathodic disbondment 28 days @ 50°C	EN12068	< 10 mm radius @23°C
Low temp flexibility	ASTM D-2671-C	- 14°C
Impact resistance	EN12068 class C	> 15 J
Indentation resistance	EN12068, Class C	No holiday with 10 KV detector @ 60°C Residual thickness > 0.6 mm *

* Remaining coating thickness

Note: Typical values in this data sheet are based on lab prepared samples. Values shown are not to be interpreted as product specifications. All properties are at 23°C unless otherwise specified.

SLEEVES THICKNESS

Backing as supplied	0.9 mm
Backing fully free recovered	1.2 mm
Adhesive as supplied	1.4 mm

Product selection guide

Max operating temperature	65°C
Compatible line coatings	PE, PP, FBE, Tape & Coal Tar
Min. preheat temperature	60°C
Recommended pipe preparation	ST2½ - ST3 or SA2½
Soil stress restrictions	Moderate
Performance	EN 12068 C30

Ordering information		
Covalence® GDAC type products are available as a kit, containing <ul style="list-style-type: none"> n. 3 or 4 sleeves* (pre-cut to measure with pre-attached closure patches) mastic filler in bars or rolls* *(n° of sleeves and mastic bars/rolls depending on joint diameter)		
Example	GDAC-DN650	
GDAC	Product type	Standard ordering options
650	Dielectric joint diameter	DN80 – DN1400

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 web-site. Application instructions and other documentation can be obtained by contacting our local distributor Tesi Spa to the following or email to info@tesigroup.com
Certified staff	Application of the described coating system should be carried out by certified personnel.

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