

## STOPAQ® WRAPPINGBAND CZ

### Product Information

**Product description:** Stopaq® Wrappingband CZ is a low temperature corrosion preventing wrap material adhering extremely well to steel and factory applied pipeline coatings like PE, Liquid Epoxies and FBE. Due to its high tack it is very suitable for application under cold ambient and substrate temperatures.

Stopaq® Wrappingband CZ is a non-toxic, cold-applied, prefabricated wrap coating, based on a compound containing non-crystalline, low-viscosity, non-crosslinked (fully amorphous), pure homopolymer Polyisobutene.

Stopaq® Wrappingband CZ is viscous at the indicated operating temperatures. Due to its liquid nature it has a set of unique properties, like cold-flow into all irregularities of the substrate, and self-healing of the complete coating system. The compound does not cure and is unable to build up internal stress. Stopaq® Wrappingband CZ is fully resistant to water, salt spray and UV-radiation, and has a low gas- and water vapour permeability.

Stopaq® Wrappingband CZ requires application of a polymeric outerwrap like Stopaq® Outerwrap or Stopaq® High Impact Shield. This improves impact and indentation resistance of the coating system and supports the self-healing ability of small damages like dents and cuts. Optionally an additional mechanical protective layer can be applied on top like Stopaq® Polyester, or Stopaq® Outerglass Shield XT Grey.

#### Features:

- Controlled cold flow providing inflow into the finest pores of the substrate
- Resistance to low temperatures without getting brittle
- Conforms to irregular shapes
- Low surface tension; adheres on many dry substrates at a molecular level
- Surface tolerant: no blasting techniques required, wire brushing is sufficient (ISO 8501-1: St 2)
- Constant film thickness
- Adhesion based on vanderWaals forces
- Self-healing of small dents, voids and cracks
- Inert to ageing and weathering
- Resistant to many chemicals like water, salts, acids, alkalis, polar solvents, etc. For additional information, please consult Stopaq B.V.

#### Benefits:

- Environmentally friendly, no health and safety hazards to humans
- Very well suited for application on new-built pipes and for pipe coating rehabilitation
- Fast and easy field application, especially under cold conditions.
- Can be moulded onto various types of irregular shaped objects
- No osmosis or underfilm migration of moisture
- No cathodic disbondment
- Cathodic Protection (CP) of steel structures is not affected

#### Product certificates:

- Stopaq® Wrappingband CZ is certified by KIWA according to BRL-K911/02: "Kiwa Product certificate for corrosion protection compound and tapes for tank and pipeline installations according to the Evaluation Guideline BRL-K911/02 with a verification according to standard EN-12068."
- Stopaq® Wrappingband CZ is certified by DVGW according to DIN 30672

### Application examples

**Buried and immersed pipes:** For protection against external corrosion of buried and immersed pipes, fittings and field joints made of carbon steel, alloy steel or ductile iron.

**Pipe coating repair and rehabilitation:** For repair and rehabilitation and protection against external corrosion of pipeline coating defects.

### Product properties of Stopaq® Wrappingband CZ

<b>Colour</b>	Green
<b>Thickness</b>	2.0 ± 0.2 mm [80 ± 8 mils] <sup>A)</sup>
<b>Density</b>	1.5 ± 0.1 g/cm <sup>3</sup> [12.5 ± 0.8 lbs/gal] (ISO 1183-1)
<b>Temperature ranges</b>	Operational: -45°C [-49°F] to +50°C [+122°F] Short term: +70°C [+158°F]
<b>Glass transition temp.</b>	≤ -65°C [-85°F] <sup>A), B)</sup>
<b>Crystallization temp.</b>	Temperature test range -100°C to +190°C <sup>A)</sup> – No evidence of crystallization
<b>Holiday detection</b>	No holidays at 15 kV <sup>A)</sup>
<b>Drip resistance</b>	Tested 48h @ +130°C [+266°F] <sup>A), B)</sup> – No dripping of compound
<b>Peel tests before and after accelerated ageing tests</b>	Tested under the following conditions: <sup>A)</sup> – Before ageing – After thermal ageing for 100 days +70°C [+158°F] – After hot water immersion for 100 days +70°C [+158°F] Tested on carbon steel (St 3, St 2, Sa 2½), and on plant coating PE: – Peel strength: – @+23°C [+73°F] ≥ 0.04 N/mm [≥ 3.6 oz/in] – @+50°C [+122°F] ≥ 0.02 N/mm [≥ 1.8 oz/in] – Cohesive separation mode – ≥ 95% coverage of surface
<b>Lap shear tests</b>	Tested on carbon steel Sa 2½ <sup>A), B)</sup> – Lap shear strength: – @+23°C [+73°F] ≥ 0.004 N/mm <sup>2</sup> [≥ 0.58 psi] – @+50°C [+158°F] ≥ 0.002 N/mm <sup>2</sup> [≥ 0.29 psi] – Cohesive separation mode – ≥ 95% coverage of surface
<b>Specific electrical insulation resistance</b>	Rs <sub>100</sub> > 10 <sup>8</sup> Ω.m <sup>2</sup> [> 10 <sup>7</sup> Ω.ft <sup>2</sup> ] <sup>A), B)</sup>

<sup>A)</sup> According to ISO 21809-3:2016 (2<sup>nd</sup> ed.), coating type 13

<sup>B)</sup> According to KIWA BRL-K911/02

### Properties of coating system comprising Stopaq® Wrappingband CZ and Stopaq® Outerwrap

<b>Thickness</b>	3.0 ± 0.3 mm [120 ± 12 mils]
<b>Impact resistance</b>	Tested at 15 J [132 in.lbf] <sup>A)</sup> – No holiday
<b>Indentation resistance</b>	Tested with 1.0 N/mm <sup>2</sup> [145 psi] <sup>A)</sup> @ +23°C [+73°F] and @ +50°C [+158°F]: <sup>A)</sup> – no holidays, residual thickness ≥ 0.6 mm [24 mils]
<b>Cathodic disbondment resistance</b>	Tested @ +23°C [+73°F] and @ +50°C [+158°F] <sup>A), B)</sup> – Disbondment 0 mm, no holiday. Defect Ø 6mm [1/4"] self-healed within 24 hours.
<b>Self-healing test</b>	Tested @ +23°C [+73°F] and @ +50°C [+158°F] – Completed < 24 hours, no holiday.

<sup>A)</sup> According to ISO 21809-3:2016 (2<sup>nd</sup> ed.), coating type 13

<sup>B)</sup> According to KIWA BRL-K911/02

### General order information

<b>Product</b>	Stopaq® Wrappingband CZ is available in rolls of various widths and lengths
<b>Art. Nr.</b>	<b>Packing size</b>
4250	50mm x 5m; 24 pcs/box; 576 pcs/pallet
4235	50mm x 10m; 12 pcs/box; 360 pcs/pallet
4240	100mm x 10m; 6 pcs/box; 180 pcs/pallet
6126	200mm x 5m; 2 pcs/box; 96 pcs/pallet
6127	200mm x 10m; 2 pcs/box; 96 pcs/pallet
<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 +35°C. Unlimited shelf life.

Application instruction - Job preparation	
<b>Tools, equipment and auxiliaries</b>	<ul style="list-style-type: none"> <li>– Temperature probe, Dew point tester, High voltage holiday tester</li> <li>– Scissors, Knife, Measuring tape</li> <li>– Abrading pads, Wire brushes</li> <li>– SFL® Substrate cleaner – or, alternatively - Isopropyl alcohol, cas. nr. 67-63-0</li> <li>– Personal protective gear, if applicable</li> </ul>
<b>Additional coating materials</b>	Stopaq® Wrappingband CZ requires application of a polymeric outerwrap, such as: <ul style="list-style-type: none"> <li>– Stopaq® Outerwrap PE or PVC</li> <li>– Stopaq® High Impact Shield</li> </ul> Additional mechanical protective layers may also be applied over the complete coating, e.g. <ul style="list-style-type: none"> <li>– Stopaq® Polyester</li> <li>– Stopaq® Outerglass Shield XT Grey</li> </ul>
<b>High humidity</b>	Stopaq® Wrappingband CZ can be applied in a humid atmosphere. The substrate should be free from condensing water which can be reached by keeping the temperature at least 3°C [6°F] above dew point.
<b>Work area and substrate</b>	The substrate should be dry, clean and protected against negative weather influences.
<b>Product conditions</b>	Stopaq® Wrappingband CZ should be dry and the temperature should preferably be above 0°C [+32°F] for the ease of application.

Application instruction - Surface preparation	
<b>General</b>	The area to be coated has to be clean, dry, and free from oil, grease and dust. All contamination including mill-scale has to be removed.
<b>Degreasing</b>	Degrease surfaces with SFL® Substrate cleaner and e.g. a lint-free cloth.
<b>Preventing condensation of water</b>	Prior to and during the application, the temperature of the substrate(s) must be at least 3°C [6°F] above the dew point.
<b>Substrate temperature</b>	Temperature of the substrate should preferably be above 0°C [+32°F]. Preheating may be required.
<b>Steel</b>	Minimum requirement for surface preparation is St 2 according to ISO 8501-1. Roughness profile is not essential for adhesion.
<b>Bitumen</b>	Remove loose bitumen. For proper adhesion, make sure that the surface is clean and dry. . The product must not be applied on moist bitumen. Moderate heating of bitumen is recommended in order to let trapped water evaporate. After this, bitumen should be allowed to cool to preferred substrate temperature.
<b>Other substrates</b>	De-gloss and degrease the surfaces by using an abrasive pad and SFL® Substrate cleaner.
<b>Cleanliness check</b>	Take a piece of Wrappingband of ± 150 mm [6"] length, remove the release foil and fold it back for about 25 mm [1"]. Put the Wrappingband onto the surface, press it firmly and leave it for 5 minutes. Pull the Wrappingband from the substrate with an angle of app. 135 deg. and a speed of 100 mm/min [4"/min]. Cohesive separation mode should occur and coverage of the surface with remaining material should be ≥ 85%. If this is less, surface cleaning is insufficient.

Application instruction – Brief version	
<b>General</b>	Specific instructions are available for various applications of Stopaq® Wrappingband CZ. Please contact Stopaq B.V. for further information.
<b>Wrapping</b>	Start with removal of a small part of the release liner and apply the Wrappingband on the substrate. Apply Wrappingband without any tension onto the substrate. Avoid air-enclosures. Mould the Wrappingband tight onto the substrate.
<b>Release foil</b>	Do not remove the release foil before application of the Wrappingband. Remove just prior to application of the Wrappingband to the surface.
<b>Overlap of wraps</b>	Side-by-side overlap: ≥ 10 mm [3/8"] Consecutive rolls: ≥ 50 mm [2"] Overlap on factory applied coating: See specific Stopaq coating instructions.

Application instruction - Quality control	
<b>Visual inspection</b>	The appearance of Stopaq® Wrappingband CZ must look smooth and tight and should be shaped around all details and into corners.
<b>Holiday detection</b>	Immediately after application of Stopaq® Wrappingband CZ, holiday testing should be carried out with a voltage of 15 kV. A brush probe is recommended. No further testing is required.

Application instruction – Mechanical protection	
<b>Mechanical protection</b>	Once applied, Stopaq® Wrappingband CZ should be protected against impacts, indentations, soil pressure and other influences by application of Stopaq® Outerwrap or Stopaq® High Impact Shield, eventually followed by Stopaq® Polyester or Stopaq® Outerglass Shield XT Grey. Please consult Stopaq B.V. for further information.

Handling and commissioning	
<b>Exposure to loads</b>	Objects coated with Stopaq® Wrappingband CZ should not be exposed to loads e.g. from supports- or lifting equipment.
<b>Immersion or burying</b>	Immersion or burying is possible immediately after completion of the coating application. Consult data sheets for specific instructions of additional materials used. Backfill and compact with clean sand and filling material without sharp stones or hard lumps of soil.

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 email to <a href="mailto:info@stopaq.com">info@stopaq.com</a>
<b>Certified staff</b>	Application of the described coating system should be carried out by certified personnel.

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