

STOPAQ® WRAPPINGBAND CZH

Product Information

Product description: Stopaq® Wrappingband CZH is a cold-applied, non-crosslinked, non-crystalline, monolithic viscous polymer based, prefabricated wrap coating with cold flow, self-healing, visco-elastic properties. Stopaq® Wrappingband CZH is a corrosion preventing, non-toxic wrap material adhering extremely well to steel and factory applied pipeline coatings like PE, PP and FBE. Stopaq® Wrappingband CZH is viscous at the indicated operating temperatures and, due to its liquid nature, flows into all irregularities of the substrate. The compound does not cure and is unable to build up internal stress. Stopaq® Wrappingband CZH is fully resistant to water and has a very low gas- and water vapour permeability.

Stopaq® Wrappingband CZH requires an additional flexible mechanical protective layer 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 a rigid mechanical protective layer can be applied on top like Stopaq® Polyester or Stopaq® Outerglass Shield.

Features:

- Controlled cold flow providing permanent 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 types of 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
- 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
- Fast and easy to apply
- Easy to control application
- 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
- Guaranteed performance

Product certificate:

- Stopaq® Wrappingband CZH 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 CZH is certified according to NSF/ANSI Standard 61: "Drinking Water System Components – Health Effects"

Application examples

Piping and Vessels: For protection against external corrosion of buried, immersed or above ground carbon steel pipelines structures and reservoirs.

Field joints: For protection against external corrosion of buried, immersed or above ground carbon steel pipeline girth-weld joints.

Elbows, Bends, Tees and Reducers: For protection against external corrosion of buried, immersed or above ground carbon steel pipe fittings.

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

Product properties Stopaq® Wrappingband CZH

Colour	Green
Thickness	2.0 ± 0.2 mm
Density	1.5 ± 0.1 g/cm ³ (NEN 1833)
Temperature ranges	Operational temperatures: - 45°C to + 70°C Short term max.: + 85°C Substrate temp. during application: - 30°C to + 70°C
Elongation	> 100 % (ASTM D1000)
Water absorption	< 0.03% (ASTM D570) ^{A)}
Permeability	< 0.2 g/m ² /day (ASTM E96)
Glass transition temperature	≤ - 65°C ^{A), B)}
Drip resistance	Tested 72h @ +130°C ^{A), B)} ; No dripping of compound
Specific electrical insulation resistance	RS ₁₀₀ > 10 ⁸ Ω.m ² ^{A), B)}
Peel strength test	Tested on steel (Sa 2½, St 2 and St 3) and plant coatings PP, PE and FBE ^{B)} . Results on all substrates: - @ -45°C: - PP, PE, and FBE ≥ 3N/mm - steel ≥ 20N/mm - @ +23°C ≥ 0.2N/mm (all substrates) - @ +70°C ≥ 0.02N/mm (all substrates) - Cohesive failure, no evidence of adhesive failure - ≥ 99% coverage of surface - ≥ 0.6 mm residual thickness
Thermal ageing resistance and hot water immersion	Ageing ^{B)} 100 days @ +90°C, dry and hot water immersion: Results of peel strength test are identical to results obtained with non-aged material.
Lap shear strength	Tested @ -45°C, @ +23°C and +70°C on steel (Sa 2½, St 2 and St 3) ^{B)} . Results on all substrates: - @ -45°C ≥ 3.0N/mm ² ; @ +23°C ≥ 0.02N/mm ² ; @ +70°C ≥ 0.002N/mm ² - Cohesive failure - ≥ 99% coverage of surface - ≥ 0.6 mm residual thickness
Resistance to thermal cycling	25 water immersed cycles 9h -30°C to +60°C and back : - Increase of water absorption < 0.07% ^{A)} - Decrease of elasticity (E-modulus) < 0.07% ^{A)}

Properties of coating system comprising Stopaq® Wrappingband CZH and Stopaq® Outerwrap PVC

Thickness	3.0 ± 0.2 mm
Impact resistance	Tested @ 15 J ^{A), B)} @ -45°C: no holidays @ +23°C: no holidays @ +70°C: no holidays
Indentation resistance	Tested @ 10 N/mm ² ^{A), B)} @ -45°C: no holidays, residual thickness ≥ 0.6 mm @ +23°C: no holidays, residual thickness ≥ 0.6 mm @ +70°C: no holidays, residual thickness ≥ 0.6 mm
Cathodic disbondment resistance	Tested at +23°C and +70°C ^{A), B)} Disbondment 0 mm, no holiday (defect Ø 6mm self-healed within 1 day)
Self-healing effect	Artificial defect Ø 6mm tested for completion of self-healing effect: @ -45°C: completed < 90 days, no holiday @ +23°C: completed < 24 hours, no holiday @ +70°C: completed < 24 hours, no holiday
Thermal ageing resistance and hot water immersion	Ageing 100 days @ 90°C, dry and hot water immersed: Results of self-healing effect are identical to results obtained with non-aged material.

^{A)} According to BRL-K911/02; ^{B)} According to ISO 21809-3:2008/Amendment 1:2011

General order information

Product	Stopaq® Wrappingband CZH is available in rolls of various widths and lengths
Art. Nr.	Packing size
6110	50mm x 5m; 24 pcs/box; 576 pcs/pallet
6120	50mm x 10m; 12 pcs/box; 360 pcs/pallet
6125	100mm x 10m; 6 pcs/box; 180 pcs/pallet (container 360 pcs)
6134	150mm x 20m; 2 pcs/box; 128 pcs/pallet
6130	200mm x 10m; 2 pcs/box; 96 pcs/pallet
6131	200mm x 20m; 2 pcs/box; 96 pcs/pallet
6243	300mm x 8.1m; 2 pcs/box; 80 pcs/pallet
6248	300mm x 10m; 2 pcs/box; 80 pcs/pallet
Handling	Handle with care. Keep boxes upright.
Storage	Store indoor, clean and dry, away from direct sunlight in a cool place below +45°C. Unlimited shelf life.

Application instruction: Preparation		Overlap of wraps	Side-by-side overlap: ≥ 10 mm Consecutive rolls: ≥ 50 mm Overlap on factory applied coating: consult specific Stopaq coating instructions.
Tools, equipment and auxiliaries	<ul style="list-style-type: none"> Temperature probe, Dew point tester, High voltage holiday tester Scissors, Knife, Measuring tape Abrading pads, Wire brushes Isopropyl alcohol, cas. nr. 67-63-0 Personal protective gear 	Specific coating applications	See specific Stopaq coating instructions for e.g. field joints, pipe wrapping, coating repair, etc.
Additional mechanical protective materials	Depending on type of application, various additional mechanical protective materials might be needed: <ul style="list-style-type: none"> Stopaq® Outerwrap PVC / PE / HTPP Stopaq® High Impact Shield Stopaq® Polyester Stopaq® Outerglass Shield 	Application instruction: Quality control	
High humidity	Stopaq® Wrappingband CZH 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 above dew point.	Visual inspection	The appearance of Stopaq® Wrappingband CZH must look smooth and tight and should be shaped around all details and into corners.
Work area and substrate	The substrate surface should be dry, clean and protected against negative weather influences.	Holiday detection	Immediately after application of Stopaq® Wrappingband CZH, holiday testing can be carried out with a voltage of 15 kV. A brush probe is recommended. No further testing is required.
Product conditions	Stopaq® Wrappingband CZH should be dry and the temperature should preferably be between +20°C and +40°C for the ease of application.	Application instruction: Mechanical protection	
		Mechanical protection	Once applied, Stopaq® Wrappingband CZH 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. Please consult Stopaq for further information.

Application instruction: Surface preparation	
General	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.
Degreasing	Degrease surfaces with isopropyl alcohol and e.g. a lint-free cloth.
Salts and bacteria	No need for additional cleaning.
Condensation of water	Prior to and during the application, the temperature of the substrate(s) must be at least 3°C above the dew point.
Substrate temperature	Temperature of the substrate should preferably be between +20°C and +40°C. Preheating may be required.
Steel	Minimum requirement for surface preparation is St 2 according to ISO 8501-1. Roughness profile is not essential for adhesion.
Bitumen	Remove loose bitumen. For proper adhesion, make sure that the surface is clean and dry. Heating up the surface to +60°C may be required. Avoid recoating of moist bitumen parts.
Other substrates	De-gloss and degrease the surfaces by using an abrasive pad and isopropyl alcohol.
Cleanliness check	Take a piece of Wrappingband of ± 150 mm length, remove the release foil and fold it back for about 25 mm. 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. Cohesive fracture should occur and coverage of the surface with remaining material should be ≥ 85%. If this is less, surface cleaning is insufficient.
Final control	The substrates prepared for coating, should be clean, dry and free of dust according to ISO 8502-3, grade 3.

Application instruction: Brief version	
Wrapping	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 surfaces.
Release foil	Do not remove the release foil before application of the Wrappingband. Remove just prior to application of the Wrappingband to the surface.

Bringing into service	
Exposure to loads	Objects coated with Stopaq® Wrappingband CZH should not be exposed to loads e.g. from supports- or lifting equipment.
Immersion or burying	Immersion or burying is possible immediately after completion of the coating application. Backfill and compact with clean sand and filling material without sharp stones or hard lumps of soil.

Stopaq® information and warranty	
Documentation	Extensive information is available on our website. Application instructions, "Stopaq® Technical Standard" and other documentation can be obtained from our head office, from our local distributor or by email to info@stopaq.com
Certified staff	The application of Stopaq® coating systems should always be carried out by certified personnel.
Stopaq® performance	Extensive laboratory tests and more than 10 years of service in extreme wet and chemical aggressive environments have proven that corrosion, bacterial growth or stress corrosion cracking cannot develop on substrates coated with Stopaq® coating systems.
Long term guarantee	Stopaq® offers a 30 year guarantee on the material properties of the Stopaq® Wrappingband materials as described in this document.



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