

STOPAQ® WRAPPINGBAND CZH

Product Information

Product description: Stopaq® Wrappingband CZH is a corrosion preventing wrap material adhering extremely well to steel and plant applied pipeline coatings like PE, PP and FBE.

Stopaq® Wrappingband CZH is a non-toxic, cold-applied, prefabricated wrap coating, based on a compound consisting of non-crystalline, low-viscosity, non-crosslinked (fully amorphous), pure homopolymer Polyisobutene. It is viscous at the indicated operating temperatures and 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. It is fully resistant to water and has a low gas- and water vapour permeability.

Stopaq® Wrappingband CZH requires application of a polymeric outer wrap like Stopaq® Outerwrap (various types available) 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, additional mechanical protective layers 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
- Resistant 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
- 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 contact Seal For Life Industries

Benefits:

- Safe to use. No physical, health or environmental hazards.
- Fast and easy field application
- Can be moulded onto various types of irregular shaped objects
- No osmosis or under film migration of moisture
- No cathodic disbondment
- Cathodic Protection (CP) of steel structures is not affected

Product certificates:

- KIWA: "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."
- NSF: ANSI Standard 61 - "Drinking Water System Components – Health Effects", certified for a maximum surface area to volume ratio of 1.7 sq. in. /L.
- ISO 21809-3:2016 coating type 13

Application examples

Pipes and vessels: For protection against external corrosion of buried, submerged or above ground carbon steel, alloy steel and ductile iron pipelines and vessels.

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

Fittings: For protection against external corrosion of buried, submerged or above ground carbon steel, alloy steel and ductile iron pipe fittings such as elbows, bends, tees, reducers, flanges, etc.

Pipe coating repair and rehabilitation: For coating repair and rehabilitation of pipeline coating defects as e.g. in accordance with ISO 21809-11.

Product properties of Stopaq® Wrappingband CZH

Colour	Green
Thickness	2,0 ± 0,2 mm [80 ± 8 mils] ^{A)}
Density	1,5 ± 0,1 g/cm ³ [12.5 ± 0.8 lbs/gal] (ISO 1183-1)
Temperature ranges	Thermal resistance: +90 °C [194 °F] Continuous buried and submerged services: -45 to +70 °C [-49 to 158 °F]
Glass transition temp.	≤ -65 °C [-85 °F] ^{A), B)}
Crystallization temp.	Tested range -100 °C to +190 °C [-148 °F to +374 °F] ^{A)} : - No evidence of crystallization or melting point.
Holiday detection	No holidays at 15 kV ^{A)}
Drip resistance	Tested 48h @ +130 °C [+266 °F] ^{A), B)} : - No dripping of compound
Specific electrical insulation resistance	Rs ₁₀₀ ≥ 10 ⁹ (1E+08) Ω.m ² [≥ 10 ⁹ (1E+09) Ω.ft ²] ^{A), B)}
Adhesion	Peel tests on carbon steel (Sa 2½, St 3, and St 2) and plant coatings PP, PE, and FBE ^{A)} . Peel strengths before ageing: ^{A)} - at -45 °C [-49 °F]: PP, PE, and FBE ≥ 3 N/mm [≥ 274 ozf/in] Carbon steel ≥ 20 N/mm [≥ 1820 ozf/in] - at +23 °C [+73 °F] ≥ 0,2 N/mm [≥ 18 ozf/in] - at +70 °C [+158 °F] ≥ 0,02 N/mm [≥ 1.8 ozf/in] Peel strengths after hot water immersion and after thermal ageing, both for 100 days at 90 °C [+194 °F]: ^{A)} - at +23 °C [+73 °F] ≥ 0,2 N/mm [≥ 18 ozf/in] - at +70 °C [+158 °F] ≥ 0,02 N/mm [≥ 1.8 ozf/in] In all cases cohesive separation mode and ≥ 95% coverage of surface
Lap shear resistance	Tested on carbon steel (Sa 2½, St 3, and St 2) ^{A), B)} - Lap shear strengths: - at -45 °C [-49 °F] ≥ 3,0 N/mm ² [≥ 435 psi] - at +23 °C [+73 °F] ≥ 0,02 N/mm ² [≥ 2.9 psi] - at +70 °C [+158 °F] ≥ 0,002 N/mm ² [≥ 0.29 psi] In all cases cohesive separation mode and ≥ 95% coverage of surface
Properties of complete coating system	
Construction	- 1 layer of Stopaq® Wrappingband CZH - 2 layers of Stopaq® Outerwrap
Thickness	3,0 ± 0,3 mm [120 ± 12 mils]
Impact resistance	Tested with 15 J [132 in.lbf] at -45, +23 and +70 °C [-49, +73 and +158 °F] ^{A), B)} : No holidays
Indentation resistance	Tested with 1,0 N/mm ² [145 psi] at -45, +23 and +70 °C [-49, +73 and +158 °F] ^{A), B)} : - Residual thickness ≥ 0,6 mm [24 mils]
Cathodic disbondment resistance	Tested at +23 and +70 °C [+73 and 158 °F] ^{A), B)} : - Disbondment 0 mm, no holiday. Defect Ø 6 mm [1/4"] self-healed within 1 day.
Corrosion protection performance test	Tested according ISO 12944-6:1998 incl. 480 h Neutral Salt Spray acc. ISO 9227, and 240 h condensation acc. ISO 6270-2 (corrosivity category C5-M): - No blistering (ISO 4628-2: 0 (S0)); No rusting (ISO 4628-3: Ri 0); No cracking (ISO 4628-4: 0 (S0)); No flaking (ISO 4628-5: 0 (S0))
Self-healing test	Artificial defect Ø 6mm [1/4"] tested for completion of self-healing: - at -45 °C [-49 °F]: completed < 90 days, no holiday - at +23 °C [+73 °F]: completed < 24 hours, no holiday - at +70 °C [+158 °F]: completed < 24 hours, no holiday

^{A)} ISO 21809-3:2016 coating type 13; ^{B)} KIWA BRL-K911/02

General order information

Product	Stopaq® Wrappingband CZH is available in rolls of various widths and lengths (other sizes on request):
Art. Nr.:	Product dimensions and contents:
6110	50mm x 5m [2"x16.5']; 24 pcs/box; 576 pcs/pallet
6120	50mm x 10m [2"x33']; 12 pcs/box; 360 pcs/pallet
6125	100mm x 10m [4"x33']; 6 pcs/box; 180 pcs/pallet (container 360 pcs/pallet)
6136	150mm x 10m [6"x33']; 2 pcs/box; 128 pcs/pallet
6134	150mm x 20m [6"x66']; 2 pcs/box; 128 pcs/pallet
6130	200mm x 10m [8"x33']; 2 pcs/box; 96 pcs/pallet
6131	200mm x 20m [8"x66']; 2 pcs/box; 96 pcs/pallet
6248	300mm x 10m [12"x33']; 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 [113 °F]. Unlimited shelf life.

Application instruction - Job preparation	
Tools, equipment and auxiliaries	<ul style="list-style-type: none"> – Temperature probe, Dew point tester, High voltage holiday tester – Scissors, Knife, Measuring tape – Abrasive cleaning pads, Wire brushes – SFL Cleaning Wipes or Isopropyl alcohol (cas. nr. 67-63-0) – Personal protective gear
Additional coating materials	Stopaq® Wrappingband CZH requires application of a polymeric outer wrap, such as: <ul style="list-style-type: none"> – Stopaq® Outerwrap Flex PE / PE / PVC / HSPE / HSPEX / HTPP – Stopaq® High Impact Shield Optionally, additional mechanical protective layers can be applied over the complete coating, like: <ul style="list-style-type: none"> – Stopaq® Outerglass Shield – Stopaq® Polyester
Work area and substrate	The substrate must be dry, clean and protected against negative weather influences. The substrate must be free from condensing water which can be reached by keeping the temperature at least 3 °C [6 °F] above dew point.
Product conditions	Stopaq® Wrappingband CZH must be dry and the temperature should preferably be between +20 °C and +40 °C [68 to 104 °F] for the ease of application.

Application instruction - Surface preparation	
General	The area to be coated must be clean, dry, and free from oil, grease and dust. All contamination including mill-scale must be removed.
Degreasing	Degrease surfaces with SFL Cleaning Wipes or Isopropyl alcohol and e.g. a lint-free cloth.
Substrate temperature	Prior to and during the application, the temperature of the substrate(s) must be at least 3 °C [6 °F] above the dew point to avoid condensation of water. Temperature of the substrate should preferably be between +20 °C and +40 °C [68 to 104 °F] for fast and easy application. Preheating may be required.
Carbon Steel	Minimum requirement for surface preparation is St 2 according to ISO 8501-1. Roughness profile is not essential for adhesion.
Existing coating - Bitumen	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 down to preferred substrate temperature.
Existing coatings - others	De-gloss and degrease the surfaces with SFL™ Cleaning Wipes or with isopropyl alcohol and an abrasive pad.
Cleanliness check	Take a piece of Stopaq® Wrappingband CZH of ± 150 mm [6"] length, remove the release foil and fold it back for about 25 mm [1"]. Apply it to 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 should occur and coverage of the surface with remaining material should be ≥ 95%. If this is less, surface cleaning is insufficient. At too low substrate temperatures this test may not be successful. Preheat the substrate to preferred temperature and repeat the test.

Application instruction – Brief version	
Specific Stopaq application instructions are available at Seal For Life Industries, e.g. for wrapping of pipes, field joints, fittings, etc.	
Wrapping	Start with removal of a small part of the release liner and apply Stopaq® Wrappingband CZH on the substrate. Apply without tension and avoid air entrapment. Mould the Wrappingband tight onto the substrate.
Release liner	Do not remove the release liner from Stopaq® Wrappingband CZH until just before application to the substrate.
Overlap of wraps	Side-by-side overlap: ≥ 10 mm [3/8"] Consecutive rolls: ≥ 50 mm [2"] Overlap on existing coatings: See specific Stopaq application instructions.
Visual inspection	The appearance of Stopaq® Wrappingband CZH should look smooth and tight, and should be shaped around all details and into corners.
Holiday detection	The coated surface must be checked for holidays with a high voltage holiday detector at 15 kV equipped with a brush probe prior to application of any outer wrap material.
Application of outer wrap materials	Stopaq® Wrappingband CZH must be protected against impacts, indentations, soil pressure and other influences by application of Stopaq® Outerwrap or Stopaq® High Impact Shield. Optionally, additional mechanical protective materials like Stopaq® Outerglass Shield or Stopaq® Polyester can be installed over the complete coating system. Please consult Seal For Life Industries for further information.

Handling and commissioning	
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. 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	
Documentation	Extensive information is available on our web-site. 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 should be carried out by certified personnel.