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.

Stopaq® Wrappingband CZH 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 CZH is fully resistant to water and has a low gas- and water vapour permeability.

Stopaq® Wrappingband CZH requires application of a polymeric outerwrap 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 XT Grey.

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 consult Stopaq B.V.

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 underfilm migration of moisture
- No cathodic disbondment
- Cathodic Protection (CP) of steel structures is not affected

Product certificates:

- Stopaq® Wrappingband CZH is certified by 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."*
- 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, alloyed steel and ductile iron pipelines structures and reservoirs.

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

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

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

Product properties of Stopaq® Wrappingband CZH

Colour	Green
Thickness	2,0 ± 0,2 mm [80 ± 8 mils] [A]
Density	1,5 ± 0,1 g/cm³ [12.5 ± 0.8 lbs/gal] (ISO 1183-1)
Temperature ranges	Operational: -45 °C to +70 °C [-49 °F to +158 °F] Short term: +90 °C {+194°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} ≥ 10^8 (1E+08) Ω.m² [≥ 10^9 (1E+09) Ω.ft²] [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)] – @ -45 °C [-49 °F]: PP, PE, and FBE ≥ 3 N/mm [≥ 274 ozf/in] Carbon steel ≥ 20 N/mm [≥ 1820 ozf/in] – @ +23 °C [+73 °F] ≥ 0,2 N/mm [≥ 18 ozf/in] – @ +70 °C [+158 °F] ≥ 0,02 N/mm [≥ 1.8 oz/in] Peel strengths after hot water immersion and after thermal ageing, both for 100 days at 90 °C [+194 °F]: [A)] – @ +23 °C [+73 °F] ≥ 0,2 N/mm [≥ 18 ozf/in] – @ +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: – @-45 °C [-49 °F] ≥ 3,0 N/mm² [≥ 435 psi] – @+23 °C [+73 °F] ≥ 0,02 N/mm² [≥ 2.9 psi] – @+70 °C [+158 °F] ≥ 0,002 N/mm² [≥ 0.29 psi] In all cases cohesive separation mode and ≥ 95% coverage of surface

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

Thickness	3,0 ± 0,3 mm [120 ± 12 mils]
Impact resistance	Tested with 15 J [132 in.lbf] @ -45 °C [-49 °F], @ +23 °C [+73 °F] and @ +70 °C [+158 °F] [A), B)]: No holidays
Indentation resistance	Tested with 1,0 N/mm² [145 psi] @ -45 °C [-49°F], @ +23 °C [+73 °F] and @ +70 °C [+158 °F] [A), B)]: – Residual thickness ≥ 0,6 mm [24 mils]
Cathodic disbondment resistance	Tested @ +23 °C [+73 °F] and @ +70 °C [+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: @ -45 °C [-49 °F]: completed < 90 days, no holiday @ +23 °C [+73 °F]: completed < 24 hours, no holiday @ +70 °C [+158 °F]: completed < 24 hours, no holiday

[A)] According to ISO 21809-3:2016 coating type 13; [B)] According to KIWA BRL-K911/02

General order information

Product		Stopaq® Wrappingband CZH is available in rolls of various widths and lengths (others 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	– Temperature probe, Dew point tester, High voltage holiday tester – Scissors, Knife, Measuring tape – Abrading pads, Wire brushes – SFL™ Cleaning Wipes, SFL™ Substrate Cleaner, 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: – Stopaq® Outerwrap PE/PVC/HSPE/HSPEX/HTPP – Stopaq® High Impact Shield Optionally, additional mechanical protective layers can be applied over the complete coating, like: – Stopaq® Outerglass Shield XT Grey – Stopaq® Polyester
High humidity	Stopaq® Wrappingband CZH can be applied in a humid atmosphere. 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.
Work area and substrate	The substrate must be dry, clean and protected against negative weather influences.
Product conditions	Stopaq® Wrappingband CZH must be dry and the temperature should preferably be between +20 °C and +40 °C [+68 °F 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 with SFL™ Substrate Cleaner and a lint-free cloth.
Preventing condensation of water	Prior to and during the application, the temperature of the substrate(s) must be at least 3 °C [6 °F] above the dew point.
Substrate temperature	Temperature of the substrate should preferably be between +20 °C and +40 °C [+68 °F 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 SFL™ Substrate cleaner and an abrasive pad.
Cleanliness check	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 ≥ 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

See specific Stopaq coating instructions for e.g. field joints, pipe wrapping, coating repair, fittings, etc.

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.
Release foil	Do not remove the release foil before application of the Wrappingband. Remove just prior to application of the Wrappingband to the surface.
Overlap of wraps	Side-by-side overlap: ≥ 10 mm [3/8"] Consecutive rolls: ≥ 50 mm [2"] Overlap on existing coatings: See specific Stopaq coating instructions.
Visual inspection	The appearance of Wrappingband 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 using 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 XT Grey or Stopaq® Polyester can be installed over the complete coating system. Please consult Stopaq B.V. 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 sending email to **info@cpgi.kz**
Certified staff	Application of the described coating system should be carried out by certified personnel.

SEALFORLIFE Industries

CPGI

Authorized distributor / Kazakhstan

info@cpgi.kz • www.cpgi.kz