

## STOPAQ® PASTE CZH

### Product Information

**Product description:** Stopaq® Paste CZH is a mouldable corrosion preventing compound that is used for filling of voids and levelling of irregular surfaces prior to application of Stopaq® coating materials. It adheres extremely well to steel and factory applied pipeline coatings like PE, PP and FBE.

Stopaq® Paste CZH is a non-toxic, cold-applied compound, based on non-crystalline, low-viscosity, non-crosslinked (fully amorphous), pure homopolymer Polyisobutene.

Stopaq® Paste 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. The compound does not cure and is unable to build up internal stress. Stopaq® Paste CZH is fully resistant to water, salt spray and UV-radiation, and has a low gas- and water vapour permeability.

Stopaq® Paste CZH requires application of additional flexible mechanical protective layers like Stopaq® Outerwrap. This supports self-healing ability of small damages like dents and cuts in the complete Stopaq® coating system, and improves impact and indentation resistance. Optionally an additional mechanical protective layer can be applied on top like Stopaq® Polyester or Stopaq® Outerglass Shield.

#### 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)
- 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:

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

### Application examples

**Flanges:** For protection against external corrosion and shaping of connection flanges, insulation flanges and blind flanges.

**Valves:** For protection against external corrosion and shaping of valves.

**Irregular shaped parts:** For protection against external corrosion and shaping of manhole covers, bolts & nuts, etc.

**Cad-welds:** For protection against external corrosion of welded CP-wire connections on underground pipelines (Pin-brazes) and underground steel structures protected by CP.

**Pipe coating repairs:** For protection against external corrosion and as filler for pipeline coating defects of e.g. 3LPE coated pipelines, prior to application of consecutive coating materials.

### Product properties of Stopaq® Paste CZH

<b>Colour</b>	Green
<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>	Thermal resistance: + 90 °C [+194 °F] Operational: - 45 °C to + 70 °C [-49 °F to +158 °F]
<b>Glass transition temperature</b>	≤ - 65 °C [-85 °F] <sup>A)</sup>
<b>Crystallization temperature</b>	Tested range -100 °C to +190 °C [-148 °F to +374 °F] <sup>A)</sup> – No evidence of crystallization or melting
<b>Holiday detection</b>	No holidays at 5 kV/mm [40 mils] + 5 kV <sup>A)</sup>
<b>Adhesion</b>	Tested under the following conditions: <sup>A)</sup> – Before ageing – After thermal ageing for 100 days +90 °C [+194 °F] – After hot water immersion for 100 days +90 °C [+194 °F] Tested @+23 °C and +70 °C [73 °F and 158 °F] on carbon steel (St 3, St 2, Sa 2½), and plant coating PE: – Coating leaves a film of corrosion preventative compound on the substrate.
<b>Lap shear tests</b>	Tested on carbon steel Sa 2½ <sup>A)</sup> – Lap shear strength: @+23 °C [+73 °F] ≥ 0,004 N/mm <sup>2</sup> [0.58 psi] @+70 °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>	RS100 > 10 <sup>8</sup> (1E+08) Ω.m <sup>2</sup> [≥ 10 <sup>9</sup> (1E+09)Ω.ft <sup>2</sup> ] <sup>A)</sup>

<sup>A)</sup> According to ISO 21809-3:2016 coating type 13

### General order information

<b>Product</b>	Stopaq® Paste CZH is available in sheets, packed in siliconized foil in cardboard boxes.
<b>Art. Nr.:</b> 69120-02000	<b>Product dimensions and contents:</b> Sheet 2 kg [4.4 lbs] , 10 pcs./box, 320 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 +45 °C [113 °F]. Unlimited shelf life.

Application instruction - Job preparation		Application instruction - Brief version	
<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, Putty knife, Measuring tape</li> <li>– Abrasive cleaning pads, Wire brushes</li> <li>– SFL Cleaning Wipes or Isopropyl alcohol, cas. nr. 67-63-0</li> <li>– Personal protective gear</li> </ul>	See specific Stopaq coating instructions for e.g. field joints, pipe wrapping, coating repair, fittings, etc.	
<b>Additional coating materials</b>	Depending on type of application, various additional coating materials might be needed, such as: <ul style="list-style-type: none"> <li>– Stopaq® Wrappingband CZH</li> <li>– Stopaq® Outerwrap PE or PVC</li> <li>– Stopaq® Geotextile</li> <li>– Stopaq® Outerglass Shield</li> <li>– Stopaq® Polyester</li> </ul>	<b>Boundaries in flange application</b>	Apply wraps of Stopaq® Wrappingband CZH onto the pipe sections underneath and beyond the planned boundaries of Stopaq® Paste CZH.
<b>High humidity</b>	Stopaq® Paste 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.	<b>Application</b>	Apply lumps of mouldable Stopaq® Paste CZH around the shaped objects and apply pressure in order to affix it to the substrate. Avoid air inclusions. After shaping, the surface should be smooth to enable proper application of additional materials.
<b>Work area and substrate</b>	The substrate must be dry, clean and protected against negative weather influences.	<b>Reinforcement</b>	In case the layer thickness of Stopaq® Paste CZH exceeds 20 mm [3/4"], it is recommended to apply a reinforcement interlayer web like Stopaq® Geotextile for stabilization of the moulded paste layer.
<b>Product conditions</b>	Stopaq® Paste CZH must be dry and the temperature should preferably be above +35 °C [95 °F] for the ease of application. To achieve this, the sheets can be heated with the heating blanket or in an oven	<b>Visual inspection</b>	The appearance of Stopaq® Paste CZH must look smooth and tight, and should cover all details with a thickness of at least 20 mm [3/4"].
<b>Application instruction - Surface preparation</b>		<b>Holiday detection</b>	The coated surface must be checked for holidays using a high voltage holiday tester at 5 kV/mm + 5 kV (max. 25 kV) equipped with a brush probe prior to application of any additional coating material.
<b>General</b>	The area to be coated must be clean, dry, and free from oil, grease and dust. All contamination including mill-scale must be removed.	<b>Application of outer wrap materials</b>	Stopaq® Paste CZH must be protected against impacts, indentations, soil pressure and other influences by application of Stopaq® Outerwrap. Optionally, additional mechanical protective materials like Stopaq® Outerglass Shield or Stopaq® Polyester can be installed over the complete coating system. Please consult Stopaq B.V. for further information.
<b>Degreasing</b>	Degrease surfaces with SFL Cleaning Wipes or Isopropyl alcohol and e.g. a lint-free cloth.	<b>Handling and commissioning</b>	
<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>Exposure to loads</b>	Objects coated with Stopaq® Paste CZH should not be exposed to loads e.g. from supports- or lifting equipment.
<b>Substrate temperature</b>	Temperature of the substrate should preferably be above +20 °C [68 °F] for fast and easy application. Preheating may be required.	<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.
<b>Existing coating - Bitumen</b>	Cut away the existing bitumen from the area to be coated, and make sure that the bare pipe surface is clean and dry. Stopaq® Paste CZH must be applied seamless against the existing bitumen.	<b>Information</b>	
<b>Existing coatings - others</b>	De-gloss and degrease the surfaces with SFL™ Cleaning Wipes, or Isopropyl alcohol and an abrasive pad.	<b>Documentation</b>	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 <a href="mailto:info@sealforlife.com">info@sealforlife.com</a>
<b>Cleanliness check</b>	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"]. 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.	<b>Certified staff</b>	Application of the described coating system should be carried out by certified personnel.



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