

STOPAQ® PASTE CZ

Product Information

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

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

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

Stopaq® Paste CZ requires application of additional flexible mechanical protective layers like Stopaq® Outerwrap. This improves impact and indentation resistance of the coating system and supports self-healing ability of small damages like dents and cuts in the complete coating. 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)
- 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 at low temperatures
- 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 CZ

Colour	Green
Density	1,5 ± 0,1 g/cm ³ [12.5 ± 0.8 lbs/gal] (ISO 1183-1)
Temperature ranges	Operational: - 45 °C to + 50 °C [-49 °F to +122 °F] Short term: + 70 °C [+158 °F]
Glass transition temperature	≤ - 65 °C [-85 °F] ^{A)}
Crystallization temperature	Tested range -100 °C to +190 °C [-148 °F to +374 °F] ^{A)} – No evidence of crystallization or melting
Holiday detection	No holidays at 5 kV/mm [40 mils] + 5 kV ^{A)}
Adhesion	Tested under the following conditions: ^{A)} – Before ageing – After thermal ageing for 100 days +70 °C [+158 °F] – After hot water immersion for 100 days +70 °C [+158 °F] Tested @+23 °C and +50 °C on carbon steel (St 3, St 2, Sa 2½), and on plant coating PE: – Coating leaves a film of corrosion preventative compound on the substrate.
Lap shear tests	Tested on carbon steel Sa 2½ ^{A)} – Lap shear strength: @+23 °C [+73 °F] ≥ 0,004 N/mm ² [0.58 psi] @+50 °C [+122 °F] ≥ 0,002 N/mm ² [0.29 psi] – Cohesive separation mode – ≥ 95% coverage of surface
Specific electrical insulation resistance	RS ₁₀₀ > 10 ⁸ (1E+08) Ω.m ² [≥ 10 ⁹ (1E+09)Ω.ft ²] ^{A)}

^{A)} According to ISO 21809-3:2016 coating type 13

General order information

Product	Stopaq® Paste CZ is available in sheets, packed in siliconized foil in cardboard boxes
Art. Nr.:	<u>Product dimensions and contents:</u> 6141 Sheet 2kg, 6 pcs./box, 288 pcs./pallet
Handling	Handle with care. Keep boxes upright.
Storage	Store indoor, clean and dry, away from direct sunlight in a cool place below +35 °C [+95 °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, Putty knife, Measuring tape – Abrading pads, Wire brushes – SFL™ Cleaning Wipes, SFL™ Substrate Cleaner, or Isopropyl alcohol, cas. nr. 67-63-0 – Heating blanket or oven (for pre-heating Paste) – Personal protective gear
Additional coating materials	Depending on type of application, various additional coating materials might be needed, such as: <ul style="list-style-type: none"> – Stopaq® Wrappingband CZ / CZH – Stopaq® Geotextile – Stopaq® Outerwrap PE/PVC/HSPE/HSPEX – Stopaq® Outerglass Shield XT Grey – Stopaq® Polyester
High humidity	Stopaq® Paste CZ 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® Paste CZ must be dry and the temperature should preferably be between +20 °C and +30 °C [+68 °F to +86 °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 SFL™ Substrate Cleaner and e.g. 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 above +10 °C [+50 °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 Stopaq® Wrappingband CZ 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.	
Boundaries in flange application	Apply wraps of Stopaq® Wrappingband onto the pipe sections underneath and beyond the planned boundaries of Stopaq® Paste CZ.
Application	Apply lumps of mouldable Stopaq® Paste CZ 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.
Reinforcement	In case the layer thickness of Stopaq® Paste CZ exceeds 20mm [3/4"], it is recommended to apply a reinforcement interlayer web for stabilization of the moulded paste layer.
Visual inspection	The appearance of Stopaq® Paste CZ must look smooth and tight and should cover all details with a thickness of at least 20 mm [3/4"].
Holiday detection	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.
Application of outer wrap materials	Stopaq® Paste CZ must be protected against impacts, indentations, soil pressure and other influences by application of Stopaq® Geotextile followed by application of Stopaq® Outerwrap. 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® Paste CZ 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@stopaq.com
Certified staff	Application of the described coating system should be carried out by certified personnel.



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DISCLAIMER: Seal For Life Industries warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Seal For Life Industries' written instructions. Because many installation factors are beyond the control of Seal For Life Industries, the user shall determine the suitability of the products for the intended uses and assume all risks and liabilities in connection herewith. Seal For Life's liability is stated in its General Terms and Conditions of Sale. Seal For Life Industries makes no other warranty either express or implied. All information contained in this technical data sheet is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.