

## STOPAQ® 4100 PUTTY

### Product Information

**Product description:** Stopaq® 4100 Putty is a malleable synthetic compound for protection of underground objects against external corrosion. It is used for filling of voids and levelling of irregular surfaces, prior to application of Stopaq® coating materials.

Stopaq® 4100 Putty is a non-toxic corrosion preventative material, suited for application on tank manhole covers and irregular shaped pipeline fittings like flanges and valves. It is compatible with adjacent factory coatings like PE, PP, FBE, etc. It is fully resistant to water and has a very low permeability. It is designed for use on buried structures with low to medium service- and ambient temperatures. The compound does not cure and will not build-up internal stresses. Objects coated with Stopaq® 4100 Putty must be protected against mechanical forces like impacts and indentations by covering it with a protective layer of Stopaq® Geotextile and Stopaq® Outerwrap.

#### Features:

- Adheres on many types of dry substrates.
- Minor surface preparation required – wire brushing to St 2 cleanliness (ISO 8501-1) is sufficient, abrasive blast cleaning is not required.
- Fills the finest pores of the substrate
- No effect on Cathodic Protection
- Safe to use. No physical, health or environmental hazards

#### Benefits:

- Cost- and time saving surface preparation
- No primer required
- Fast and easy to apply
- Malleable putty, easy to mold on irregular shaped objects
- No waste - Can be re-used

**Product certificate:** Stopaq® 4100 Putty is certified according to KIWA 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."

### Application examples

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

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

**Manhole covers:** For protection against external corrosion and shaping of buried manhole covers, bolts & nuts, etc.

### Product properties of Stopaq® 4100 Putty

<b>Colour</b>	Green
<b>Density</b>	1,2 – 1,5 g/cm <sup>3</sup> [10.0 – 12.5 lb/gal] (ISO 1183-1)
<b>Temperature range</b>	Operational: -10 to +30 °C [+14 to +86 °F]
<b>Specific electrical insulation resistance</b>	> 10 <sup>8</sup> (1E+08) Ω.m <sup>2</sup> [≥ 10 <sup>9</sup> (1E+09) Ω.ft <sup>2</sup> ] (EN 12068) <sup>A)</sup>
<b>Shape retention</b>	< 4 mm [ <sup>5</sup> / <sub>32</sub> " ] @ +30 °C [+86 °F] (NEN 6910) <sup>A)</sup>
<b>Water absorption</b>	< 0.07 % <sup>A)</sup>
<b>Vitrification temperature</b>	No changes @ -10 to +30 °C [+14 to +86 °F] <sup>A)</sup>
<b>Adhesion</b>	> 30 N / 10 cm <sup>2</sup> [0.44 psi] <sup>A)</sup>
<b>Resolved shear stress</b>	> 400 Pa [0.058 psi] @ +30 °C [+86 °F] <sup>A)</sup>

### General order information

<b>Product</b>	Stopaq® 4100 Putty is available in different packing sizes
<b>Art. Nr.:</b>	<b>Product dimensions and contents:</b>
4110	Cartridge 0,53 kg [18.7 oz] , 20 pcs/box, 720 pcs/pallet
4125	Tubular bag 2 kg [4.4 lbs], 9 pcs/box, 324 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 +30 °C [86 °F]. Unlimited shelf life.

Application instruction - Job preparation	
<b>Tools, equipment and auxiliaries</b>	<ul style="list-style-type: none"> <li>– Temperature probe, Dew point tester, High voltage holiday tester</li> <li>– Injection tool with flexible nozzle</li> <li>– Scissors, Knife, Putty knife, Measuring tape</li> <li>– Abrasive cleaning pads, Wire brushes</li> <li>– SFL Cleaning Wipes, SFL Substrate Cleaner, or Isopropyl alcohol, cas. nr. 67-63-0</li> <li>– Personal protective gear</li> </ul>
<b>Additional coating materials</b>	Depending on type of application, various additional mechanical protective materials might be needed: <ul style="list-style-type: none"> <li>– Stopaq® Wrappingband CZ or CZH</li> <li>– Stopaq® Geotextile</li> <li>– Stopaq® Outerwrap (various types available)</li> </ul> Optional additional mechanical protection: <ul style="list-style-type: none"> <li>– Stopaq® Outerglass Shield XT Grey or Stopaq® Polyester</li> </ul>
<b>High humidity</b>	Stopaq® 4100 Putty 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>Work area and substrate</b>	The work area and substrate must be dry, clean and protected against negative weather influences.
<b>Product conditions</b>	Stopaq® 4100 Putty must be dry and the temperature should preferably be between +20 °C and +30 °C [68 to 86 °F] for the ease of application.

Application instruction - Surface preparation	
<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>Degreasing</b>	Degrease surfaces with SFL Cleaning Wipes, SFL Substrate Cleaner, or Isopropyl alcohol and e.g. a lint-free cloth.
<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>Substrate temperature</b>	Temperature of the substrate should preferably be between +20 °C and +30 °C [68 to 86 °F] for fast and easy application. Preheating may be required.
<b>Carbon Steel</b>	Minimum requirement for surface preparation is St 2 according to ISO 8501-1. Roughness profile is not essential for adhesion.
<b>Existing coating - Bitumen</b>	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.
<b>Existing coatings - others</b>	De-gloss and degrease the surfaces with SFL Cleaning Wipes, or with SFL Substrate cleaner and an abrasive pad.
<b>Final check</b>	The substrates prepared for coating must be clean, dry and free of dust according to ISO 8502-3, grade 3.

Application instruction – Brief version	
Detailed application instructions are available from Seal For Life Industries.	
<b>Coating boundaries</b>	Certain applications require that Stopaq® Wrappingband CZ or CZH is applied adjacent to the planned boundaries of Stopaq® 4100 Putty. See specific coating instructions for more information.
<b>Application</b>	Apply a small amount of Stopaq® 4100 Putty on an abrasive pad and rub it onto the surfaces to be coated. When all surfaces are covered with a thin layer of Stopaq® 4100 Putty, continue with building up, molding and shaping. Avoid air enclosures. The shaped surface should be smooth, suited for covering with additional Stopaq® coating materials.
<b>Reinforcement</b>	In case the layer thickness of Stopaq® 4100 Putty exceeds 20 mm [ $\frac{3}{4}$ "], it is recommended to apply a reinforcement interlayer web for stabilization of the moulded putty layer.
<b>Mechanical protection</b>	Stopaq® 4100 Putty must be protected against mechanical forces like impact and indentation, by application of Stopaq® Geotextile and Stopaq® Outerwrap. Mechanical protection should overlap the boundaries of applied Putty. Optionally, Stopaq® Outerglass Shield XT Grey or Stopaq® Polyester can be installed for additional mechanical protection.
<b>Visual inspection</b>	The appearance of Stopaq® 4100 Putty must look smooth and tight and should cover all details with a thickness of at least 20 mm [ $\frac{3}{4}$ "].
<b>Holiday detection</b>	Immediately after application of Stopaq® 4100 Putty, a holiday test should be carried out with a High Voltage holiday tester at $\geq 15$ kV. A brush probe is recommended. No further testing is required.

Handling and commissioning	
<b>Exposure to loads</b>	Objects coated with Stopaq® 4100 Putty should not be exposed to loads e.g. from supports- or lifting equipment.
<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.

Information	
<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>Certified staff</b>	Application of the described coating system should be carried out by certified personnel.