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	
Colour	Green
Density	1,2 – 1,5 g/cm³ [10.0 – 12.5 lb/gal] (ISO 1183-1)
Temperature range	Operational: -10 to +30 °C [+14 to +86 °F]
Specific electrical insulation resistance	> 10^8 (1E+08) Ω.m² [≥ 10^9 (1E+09) Ω.ft²] (EN 12068) A)
Shape retention	< 4 mm [5/32"] @ +30 °C [+86 °F] (NEN 6910) A)
Water absorption	< 0.07 % A)
Vitrification temperature	No changes @ -10 to +30 °C [+14 to +86 °F] A)
Adhesion	> 30 N / 10 cm² [0.44 psi] A)
Resolved shear stress	> 400 Pa [0.058 psi] @ +30 °C [+86 °F] A)

General order information		
Product		Stopaq® 4100 Putty is available in different packing sizes
	Art. Nr.:	Product dimensions and contents:
	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
Handling		Handle with care. Keep boxes upright.
Storage		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

Tools, equipment and auxiliaries	– Temperature probe, Dew point tester, High voltage holiday tester – Injection tool with flexible nozzle – Scissors, Knife, Putty knife, Measuring tape – Abrasive cleaning pads, Wire brushes – SFL Cleaning Wipes, SFL Substrate Cleaner, or Isopropyl alcohol, cas. nr. 67-63-0 – Personal protective gear
Additional coating materials	Depending on type of application, various additional mechanical protective materials might be needed: – Stopaq® Wrappingband CZ or CZH – Stopaq® Geotextile – Stopaq® Outerwrap (various types available) Optional additional mechanical protection: – Stopaq® Outerglass Shield XT Grey or Stopaq® Polyester
High humidity	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.
Work area and substrate	The work area and substrate must be dry, clean and protected against negative weather influences.
Product conditions	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

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, SFL Substrate Cleaner, or Isopropyl alcohol 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 between +20 °C and +30 °C [68 to 86 °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.
Final check	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.

Coating boundaries	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.
Application	Apply a small amount of Stopaq® 4100 Putty on an abrasive pad and rub it onto the surfaces to 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.
Reinforcement	In case the layer thickness of Stopaq® 4100 Putty exceeds 20 mm [¾"], it is recommended to apply a reinforcement interlayer web for stabilization of the moulded putty layer.
Mechanical protection	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.
Visual inspection	The appearance of Stopaq® 4100 Putty must look smooth and tight and should cover all details with a thickness of at least 20 mm [¾"].
Holiday detection	Immediately after application of Stopaq® 4100 Putty, a holiday test should be carried out with a High Voltage holiday tester at ≥ 15 kV. A brush probe is recommended. No further testing is required.

Handling and commissioning

Exposure to loads	Objects coated with Stopaq® 4100 Putty 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.

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