STOPAQ® 4100 PUTTY

Product Information

Generic type: Non cross-linked, synthetic putty for protection against external corrosion of underground objects.

Product description: Stopaq® 4100 Putty is a non-toxic material, suited for application on steel pipelines and adjacent factory coatings like PE, PP, FBE, etc. It displaces water, is fully resistant to water and has a very low permeability. It is designed for use on buried constructions as well as inside constructions with low to medium service- and ambient temperatures. It is used as a corrosion protective moulding compound for filling of voids and leveling of irregular surfaces, prior to application of a Stopaq® mechanical protective coating system. The compound does not cure and will not build-up internal stresses. Objects coated with Stopaq® 4100 Putty should be protected against mechanical impacts and indentation, e.g. by covering it with a protective layer of Stopaq® Geotextile and Stopaq® Outerwrap.

Features:
- Adheres on various types of dry substrates.
- Easy to shape and mould
- Fills the finest pores of the substrate
- Minor surface preparation required – wire brushing is sufficient, sand blasting is not required
- No primer required

Benefits:
- Harmless for environment and workers
- Fast and easy to apply
- Cost- and time saving surface preparation
- Can be moulded onto all irregular shaped objects
- No osmosis possible
- CP function is not affected
- Can be re-used - no waste

Product certificate: Stopaq® 4100 Putty is certified according to KIWA BRL-K911/02:

> "Kiwa Productcertificate 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 connection flanges, Insulation flanges and blind flanges.
Valves: For protection against external corrosion and shaping of buried valves.
Irregular shaped parts: For protection against external corrosion and shaping of buried manhole covers, bolts & nuts, etc.

Product properties STOPAQ® 4100 Putty	
Colour	Green
Density	1.2 – 1.5 g/cm³
Temperature range	Operational: -10℃ to +30℃
Specific electrical resistance*	> 10^{8} Ω.m² (EN 12068)
Shape retention *	< 4mm @ +30℃ (NEN 6910)
Water absorption *	<0.07%
Vitrification temperature *	No changes @ -10℃ to +30℃
Adhesion*	> 30N / 10 cm²
Effect of Cathodic Protection *	No effect (EN 12068)
Resistance to thermal ageing*	No change in properties (EN 12068)
Resolved shear stress*	> 400 Pa @ +30℃

* according to KIWA BRL-K911/02

General order information		
Product		Stopaq® 4100 Putty is available in different packing sizes
	Art. Nr.	Packing size
	4110	Cartridge 0.53 kg, 20 pcs/box, 720 pcs/pallet
	4125	Bag 2 kg, 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 at temperatures below 30℃. Unlimited shelf life.

Application instruction: Preparation	
Tools, equipment and auxiliaries	– Abrading pads Scotch-brite type – Caulking gun with 200mm flexible nozzle – Application set
High humidity	Stopaq® 4100 Putty can be applied in a humid atmosphere. The substrate to be covered should be heated to at least 3℃ above the dew point.
Work area and substrate	The work area and substrate should be protected against negative weather influences.
Product conditions	Stopaq® 4100 Putty should be dry and the temperature must be between +25℃ and +30℃ for the ease of handling and shaping.

Application instruction: Surface preparation	
General	The area to be coated has to be clean, dry, and free from oil, grease and dust. All contamination including mill-scale has to be removed.
Degreasing	Degrease surfaces with isopropyl alcohol
Salts and Bacteria	No need for additional cleaning.
Condensation of water	Prior to and during the application, the temperature of the substrate(s) must be at least 3℃ above the dew point to avoid condensation of water onto the substrate.
Steel	Minimum requirement for surface preparation is St 2 according to ISO 8501-1. Roughness profile is not essential for adhesion.
Bitumen	Remove loose bitumen. For proper adhesion, make sure that the surface is clean and dry. Heating up the surface to 60ºC and cooling down afterwards is recommended. Avoid the recoating of moisturous bitumen parts.
Other substrates	De-gloss and degrease the surfaces by using an abrasive pad and isopropanol for proper adhesion.
Final control	The substrates prepared for coating, should be clean, dry and free of dust according to ISO 8502-3, grade 3.

Application instruction: Brief version	
Boundaries of flanges	Apply a wrap of 100mm wide Stopaq® Wrappingband CZ or CZH adjacent to the planned boundaries of Stopaq® 4100 Putty.
Application	Apply a small amount of Stopaq® 4100 Putty on an abrading pad and rub it onto the surfaces to be protected. When all surfaces are covered with a thin layer of 4100 Putty, continue building up, moulding and shaping. Avoid air enclosures. The shaped surface should be smooth, suited for covering with Stopaq® mechanical protective layers.
Reinforcement	In case the layer of Stopaq® 4100 Putty thickness exceeds 20mm, it is recommended to apply a reinforcement interlayer web for stabilization of the moulded putty layer.

Application instruction: Quality control	
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.
Holiday detection	Immediately after application of Stopaq® 4100 Putty, a holiday test should be carried out with a High Voltage holiday test unit at ≥15 kV. A brush probe is recommended. No further testing is required.

Application instruction: Mechanical protection	
Mechanical protection	Once applied, Stopaq® 4100 Putty should be protected against impacts, indentations, soil pressure and other influences by means of a layer of geotextile, wraps of Stopaq® Outerwrap, and/or Stopaq® Polyester. Mechanical protection should overlap the boundaries of applied Putty.

Bringing into service	
Exposure to loads	Objects coated with Stopaq® 4100 Putty should not be exposed to loads from supports- or lifting equipment.
Immersion or burying	Immersion or burying is possible immediately after completion of the coating application. Backfill and compact with clean sand and fill material without sharp stones or hard lumps of soil.

Stopaq® information	
Documentation	Extensive information is available on our web-site. Application instructions, “Stopaq® Technical Standard” and other documentation can be requested from our head office, from our local distributor or by email to **info@stopaq.com**
Certified staff	The application of Stopaq® coating system should always be carried out by certified personnel.
Stopaq® performance	Extensive laboratory tests and more than 10 years of service in extreme wet and chemical aggressive environments have proven that corrosion, bacterial growth or stress corrosion cracking cannot develop on substrates coatedwith Stopaq® coating systems.

STOPAQ®
SEALFORLIFE

STOPAQ B.V.
Gasselterstraat 20
9503 JB Stadskanaal
P.O. Box 285
9500 AG Stadskanaal
The Netherlands
T: +31 (0) 599 696 170
F: +31 (0) 599 696 177
E: info@stopaq.com
I: www.stopaq.com