

STOPAQ® HIGH IMPACT SHIELD

Product Information

Generic type: Mechanical protective stabilized cross-linked polyethylene backing with a special adhesive for field joint application operating onshore and offshore up to 65°C.

Product Description: The STOPAQ® High Impact Shield comes in a standard size of 660mm (higher or lower on request) to act as a mechanical protection layer over STOPAQ® Wrappingband CZ(H) and which can be fixed to the adjacent pipeline coating types such as PE, PP. The STOPAQ® High Impact Shield provides a combination of excellent corrosion protection, adhesion to the substrate together with extremely easy and fast application, significant application and surface pre-treatment cost savings. Depending on the cutback, the first layer always consists of STOPAQ® Wrappingband CZ(H) in preferably 2 Wrappings with min. 30mm overlap at the weld seam. The Wrappingband CZH is always viscous at the temperatures of use, -45°C up to max. +85°C (cold flow) and therefore flows, into all irregularities on the steel surface and is able to self-heal small damages like dents and cuts in the shrinkable seamless mechanical protection layer.

Features:

- Extremely fast and very easy to apply
- Excellent adhesion to steel, PE, PP, FBE
- Excellent combination of self-healing viscous-elastic corrosion prevention with shrinkable sleeve technology
- Controlled shrink technique due to insulating properties of viscous-elastic corrosion prevention layer

Benefits:

- No preheating of the pipeline needed which may cause steel oxidation
- No special induction heating equipment needed
- No extensive and expensive SA 2,5 blasting required
- No special epoxy primers required
- No under creep or water ingress possible
- No cathodic disbondment
- Guaranteed corrosion prevention

Onshore & offshore applications

Rehab straight pipelines: Carbon steel, PE, PP pipelines (underground, immersed), structures and reservoirs. Shield can be applied as wrap-around shield at a 30 degrees angle.

New Construction: Field-joints.

Product Properties_1mm STOPAQ® High Impact Shield

Thickness	1,7mm (ISO 9001)
Indentation resistance	< 0,6mm at 23°C (EN 12068) no pinholes at 15kv spark test
Peel strength to PE	3,6 N/mm at 23°C (EN 12068)
Shear strength to PE	0,54 N/mm ² at 23°C (EN 12068)
Colour	Black
Shrinking rate	> 30% when applied without STOPAQ® Wrappingband CZH
Temperature	Max. operation temperature +65°C
Elongation	> 400% (ASTM D638)
Hardness	55 (ASTM D 2240)
Tensile Strength	22,8Mpa

General Order Information

Product	STOPAQ® High Impact Shield is available on rolls: 660mm wide, 30meter long plus suitable closure strips of 100mm and 150mm.
Rehabilitation jobs:	On request, 600mm width is available for wrap-around rehab applications.
Packaging	Cardboard spools. Packed in cardboard boxes.
Handling	Handle with care, box always upright.
Storage	Store dry and clean in original packaging. Keep cool, not above 40°C. (short term storage > 24 Months)

Application instruction Preparation

Application equipment 1. Temperature probe, Dew point meter and 20 kV holiday tester.
 2. Scissors, Knife, and Measuring tape.
 3. Abrading pads and Wire brushes.
 4. Safety goggles, hard hat & Gloves eruit, hiervoor in de plaats: steel roller.
 5. Gas heater.
 6. Suitable cleaning agent.

High humidity STOPAQ® Wrappingband CZH can be applied in a humid atmosphere that does not reach the dew point.

Work area and substrate The work area and substrate should be protected against negative weather influences. The Wrapping band CZ(H) should be dry and have a room temperature, for the ease of handling and shaping.

Application instruction Surface Preparation

General The areas to be coated have to be clean, dry, and free from grease and dust. All contamination has to be removed.

Degreasing Salts and Bacteria De-grease surfaces with Isopropanol. No need for additional cleaning.

Condensation - water Prior to - and during the application, the temperature of the substrate(s) must be at least 3°C above the dew point. Surface preparation minimal St2/3, according ISO 8501-3.

Steel Adjacent Pe, PP Abrade the surfaces by using an abrasive pad and Isopropanol. Heating the PE or PP adjacent coating might be required up to 60°C.

Final control The substrates prepared for coating, should be clean, dry and free of dust according to ISO 8502-3, rating 3.

Application instruction Brief version

Wrapping Apply the sticky side of the Wrapping band on the substrate. Do not apply with TENSION, but LAY the Wrapping band on the substrate. Avoid air-enclosures. Massage the Wrapping band tight on the substrate surfaces.

Overlap STOPAQ® on STOPAQ® at weld seam: min. 30mm
 STOPAQ® on factory coated pipeline: min. 50mm

Application instruction Final steps

Visual inspection The applied Wrappingband CZH as part of the HI Shield system must look smooth and tight and should be shaped around all details and into corners.

Quality inspection Immediately after application, holiday testing can be carried out with a High-Voltage test unit (15 - 25 kV) Test with minimum 5 kV per mm coating thickness. A brush probe is recommended. No further testing is required.

Application instruction High Impact Shield

Mechanical Protection Rehabilitation Wrap the shrinkable Wrapping Sleeve around STOPAQ® CZH wrapped pipe and shrink it by means of the gas heater into a seamless tight protective layer. If specs allow, you may leave STOPAQ® CZH visible at the beginning and end to create an effective sealing barrier. Installation is carried out over STOPAQ® Wrappingband CZH and a cleaned and abraded surface factory pipe line pipe coating surface without any primer being required.

Mechanical Protection Field Joints

Visual inspection Make sure that there is no air-bubble visible and that the adhesive of the Shrink sleeve is visible at the overlap.

Bringing into service

Bringing into service Backfilling is possible immediately after completion of the coating application. The areas coated with STOPAQ® should not be exposed to loads from supports and lifting equipment.

Backfilling Backfill and compact with clean sand and fill material without sharp stones or hard lumps of soil.

STOPAQ® Information and Warranty

Documentation Extensive information is available on our website. Detailed application instructions, "STOPAQ® Technical Standard" can be acquired from our head office or local distributor: info@stopaq.com

Certified staff The application of STOPAQ® CZH coating systems should always be carried out by certified personnel.

Long term guarantee STOPAQ® offers a 30 year guarantee on the material properties of the STOPAQ® CZH corrosion prevention materials as described in this document. The lifetime of the STOPAQ® CZH materials is more than twice this period.



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