

STOPAQ® OUTERWRAP HSPEX

Product Information

Product description: Stopaq® Outerwrap HSPEX is an outer wrap tape providing mechanical protection to corrosion preventing coating systems comprising e.g. Stopaq® Wrappingband (various types). It is made of a radiation cross-linked high density polyethylene backing (HDPE) and high tack butyl rubber adhesive, provided with a siliconized PE release liner for proper unwinding of the roll. Stopaq® Outerwrap HSPEX is well suited for above ground, underground and submerged applications. The butyl rubber adhesive layer provides good adhesion to the backing of Stopaq® Wrappingband as well as to its own backing. It also provides good adhesion to polyolefin line pipe coatings such as 3LPE. Stopaq® Outerwrap HSPEX is a highly flexible UV-resistant tape, providing good resistance of the complete coating system to impacts, indentations and abrasion, as well as resistance against the influences from various chemicals.

Features:

- Cold applied tape
- High tack adhesive
- Good conformability
- Good adhesion to Stopaq® Wrappingband as well as to its own backing
- Provides excellent impact and indentation resistance.
- Very high resistance to ageing and weathering, even when exposed to maximum or minimum service temperature for longer periods of time.

Benefits:

- Very useful in cold weather applications
- Very suitable for manual application
- Easy to stretch and to apply
- Resists impacts and indentations which may occur during installation and backfilling.

Application examples

Pipes and Vessels: Provides mechanical protection of Stopaq® corrosion preventing coating systems applied on pipeline structures and reservoirs.

Field joints: Provides mechanical protection of Stopaq® corrosion preventing coating systems applied on girth-weld joints of on-shore and offshore pipelines.

Pipe fittings: Provides mechanical protection of Stopaq® corrosion preventing coating systems applied on pipe fittings like elbows, bends, tees, reducers and flanges.

Wet or immersed structures: Provides mechanical protection of Stopaq® corrosion preventing coating systems applied on wet or immersed steel structures.

Product properties of Stopaq® Outerwrap HSPEX

Colour	Black	
Thickness	Backing	0.25 mm
	Total	0.90 mm
Temperature range	Service:	-45 to +50°C
	Short term max.:	+70°C
Peel strength layer to layer	Peel strength (P ₀) ^{*)}	
	– @ +23 °C: ≥ 0.2 N/mm [1.6 N/mm typical]	
	– @ +50 °C: ≥ 0.02 N/mm [0.25 N/mm typical]	
	After thermal ageing for 100 days @ +70°C ^{*)}	
	– Peel strength @ +23 °C: 1.6 N/mm [typical]	
	– P ₁₀₀ / P ₀ : ≥ 0.75 [1.0 typical]	
	After hot water immersion for 100 days @ +70°C	
	– Peel strength @ +23 °C: 1.6 N/mm [typical]	
	– P ₁₀₀ / P ₀ : 1.0 [typical]	
Elongation at break	Elongation (E ₀)	
	– @ +23 °C: 792% [typical]	
	After thermal ageing for 100 days @ +70 °C ^{*)}	
	– @ +23 °C: E ₁₀₀ / E ₀ ≥ 0.75	

Properties of coating system comprising Stopaq® Wrappingband CZH and Stopaq® Outerwrap HSPEX

Total thickness	3.6 – 4.0 mm
Self-healing test	Self-healing of an artificial defect of Ø 6 mm:
	– @ +23 °C: no holiday (≤ 24 hr.)
	– @ +50 °C: no holiday (≤ 24 hr.)
Impact resistance	Tested at 15 J and @ +23 °C ^{*)}
	– no holidays
Indentation resistance	Tested at 10 N/mm ² ^{*)}
	– @ +23 °C: no holiday, residual coating thickness ≥ 0.6 mm (within 1 hour after removal of load)
	– @ +95 °C: no holiday, residual coating thickness ≥ 0.6 mm (within 1 hour after removal of load)
Cathodic disbondment resistance	After 28 days ^{*)}
	– @ +23 °C: disbondment 0 mm, no holiday
	– @ +70 °C: disbondment 0 mm, no holiday
	In all cases self-healing completed within 24 hr.

^{*)} According to ISO 21809-3 Amendment 1 (2011)

General order information

Product	Stopaq® Outerwrap HSPEX is available in rolls, wound on cardboard cores, packed in cardboard boxes:
Art. Nr.:	Product dimensions and contents:
1290-01524	2 inch x 50 ft, 24 rolls/box, 648 rolls/pallet
1291-01524	3 inch x 50 ft, 16 rolls/box, 432 rolls/pallet
1292-01524	4 inch x 50 ft, 12 rolls/box, 324 rolls/pallet
Handling	Handle with care. Keep boxes upright.
Storage	Store indoor, clean and dry, away from direct sunlight in a cool place below +40°C. Shelf life 3 years after production date

Application instruction - Job preparation	
Tools, equipment and auxiliaries	– Scissors, knife and measuring tape
Additional coating materials	Stopaq® Outerwrap HSPEX is applied as part of a coating system that consists of other Stopaq® coating materials, e.g. Corrosion preventing materials: – Stopaq® Wrappingband (various types) – Stopaq® Paste (various types) Additional mechanical protective materials: – Stopaq® Outerglass Shield
Wet or immersed substrates	Stopaq® Outerwrap HSPEX can be applied on wet or immersed substrates. In such cases it must be used in combination with Stopaq® Wrappingband CL or Stopaq® Wrappingband SZ. These corrosion preventing materials are specifically designed for application in such environments. Temperature of the substrate should preferably be between +10°C and +30°C.
Dry substrates	Stopaq® Outerwrap HSPEX can be applied on dry substrates. In such cases it must be used in combination with Stopaq® Wrappingband CZ or CZH. The substrate should be clean and protected against negative weather influences. The substrate should be free from condensing water which can be reached by keeping the temperature at least 3°C above dew point. Temperature of the substrate should preferably be between +10°C and +30°C.
Product conditions	Stopaq® Outerwrap HSPEX should be dry (except with immersed application) and the temperature should preferably be between +10°C and +30°C for the ease of application.

Application instruction - Brief version	
General	See specific application instructions available at Seal For Life Industries for wrapping of pipes, field joints, fittings, etc.
Example: Pipe wrapping	Horizontal pipelines should be wrapped circumferentially from left-to-right or from right-to-left. Pipelines positioned with an angle deviating from horizontal should be wrapped from bottom to top (e.g. risers). In general Stopaq® Outerwrap HSPEX should be applied with tension by gently pulling the roll of material, unless stated otherwise in specific application instructions. Start wrapping Outerwrap HSPEX with two full circumferential wraps perpendicular to the pipe, leaving 3 mm of the previously applied Stopaq® Wrappingband visible at the boundary.

Example (continued)	After the first circumferential wrap, consecutive wraps should have an overlap of $\geq 50\%$, which can be obtained by spiral application of Outerwrap HSPEX. Be careful not to create any air enclosures. Avoid tenting and bridging. Continue spiral wrapping until reaching the boundary of the area to be coated, leaving 3 mm of the previously applied Stopaq® Wrappingband visible at the boundary. When more than one roll of Outerwrap HSPEX is needed to continue wrapping, an overlap on the end of the previously applied Outerwrap HSPEX should be created of at least 100 mm. End wrapping with two full circumferential wraps perpendicular to the pipe. End with a quarter circumferential wrap of Outerwrap HSPEX without tension. In case of wrapping on horizontal pipes, the tape end should face downwards ending at 3 o'clock position. Cut off in a tie-form. The applied Outerwrap HSPEX must look smooth and tight and should be shaped around all details and into corners..
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Handling and commissioning	
Exposure to loads	Objects coated with Stopaq® Outerwrap HSPEX should not be exposed to excessive 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 or alternative filling material. Stones or hard lumps of soil must not be present in the backfill.

Information	
Documentation	Extensive information is available on our website. 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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