

STOPAQ® POLYESTER

Product Information

Product description: Stopaq® Polyester is a polyester resin pre-impregnated glass-fibre reinforced outer wrap material, curing by means of Ultraviolet light.

Stopaq® Polyester is applied on top of Stopaq® corrosion preventing coating systems to provide additional resistance against mechanical impacts, weathering, UV-radiation and chemicals.

After curing with UV-light, Stopaq® Polyester forms a hard and rigid shell on top of previously applied Stopaq® coating systems.

Features:

- Fast and easy to apply
- High resistance to mechanical impacts and indentations
- Long-term resistance to ageing effects, even when used continuously at maximum or minimum temperature specified.
- Resistant to cold, hot, wet and chemically aggressive environments
- Wide operational temperature range
- Long pot life when sheltered from UV-light sources

Benefits:

- Fast curing, relatively independent from ambient temperature
- Complete curing to be obtained by UV-A light sources and by sunlight
- Low styrene emission
- Top coats can be applied immediately after complete curing

Application examples

Soil-to-air transitions of pipelines: Rigid mechanical protection of Stopaq® corrosion preventing coating systems on risers against soil shear, mechanical impacts, indentations and weathering.

Field joint coatings: Rigid mechanical protection of Stopaq® corrosion preventing coating systems on pipeline girth welds against soil shear, mechanical impacts and indentations.

Pipe saddles: Rigid mechanical protection of Stopaq® corrosion preventing coating systems on pipe saddles against indentations and abrasion by movements of the pipeline.

Pipelines and fittings: Rigid mechanical protection of Stopaq® corrosion preventing coating systems on above ground and buried pipeline sections, bends, tees, valves and flanges against soil shear, mechanical impacts, indentations and weathering.

Product properties of Stopaq® Polyester

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| Colour | Off-white |
| Thickness | 1.7 mm |
| Density | 1.84 g/cm ³ (ISO 1183) |
| Light sources for curing | UV-A lamps (wavelength 380 – 400 nm) Sunlight |
| Temperature ranges | Ambient during application: Above +5°C Operation: -165°C to +90°C Heat distortion: +225°C |
| Hardness | Barcol: ≥ 60 (ASTM D2583) |
| Impact resistance | 57 kJ/m ² (ISO 179) |
| Elongation at break | 1.7 % (ISO 527-4) |
| Tensile strength | 65 MPa (ISO 527-4) |
| Tensile modulus | 9 GPa (ISO 527-4) |
| Flexural strength | 150 MPa (ISO 14125) |
| Flexural modulus | 9 GPa (ISO 14125) |
| Compressive strength | 150 MPa (ISO 14126) |
| Compressive modulus | 14 GPa (ISO 14126) |

General order information

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| Product | Stopaq® Polyester is supplied in rolls, packed in light-blocking foil in cardboard boxes. Art. Nr.: 1144-01000 Product dimensions and contents: Stopaq® Polyester 1000mm x 10m, 1 roll/box |
| Supplementary product | Supplementary available Stopaq® Compression Tape must be used to complete application of Stopaq® Polyester. As a rule of thumb, 3 rolls of Compression Tape are needed for the application of 1 roll of Polyester. Art. Nr.: 1143-06600 Product dimensions and contents: Stopaq® Compression Tape 100mm x 66m, 1 roll each |
| Handling | Handle with care. Avoid unnecessary exposure to light. |
| Storage | <ul style="list-style-type: none"> – Store in a cool, dark, dry, and well ventilated place in original light-blocking foil in original cardboard boxes. – Storage temperature between +5°C and +25°C. – Shelf-life when stored in original package: 6 months – Do not use if product is hardened. – See applicable Safety Data Sheet for further instructions |

| Application instruction - Job preparation | |
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| OHSE measures | Consult Safety Data Sheet for applicable exposure controls and personal protection |
| Tools, equipment and auxiliaries | <ul style="list-style-type: none"> – Scissors, knife, measuring tape, application roller – UV-A lamps (depending on surface dimensions, two or more lamps are needed), or – in case of curing by sunlight – UV-reflective mirrors. – Personal protective gear according to Safety Data Sheet, UV-blocking safety glasses. |
| Ambient conditions | <p>Ambient temperatures should be above +5°C. During application of Stopaq® Polyester, the rolls, the cut pieces of material and the work area should be shielded against:</p> <ul style="list-style-type: none"> – UV-radiation and light to prevent premature curing. – Water, rain, moisture and condensing water on the substrate to prevent detrimental effects on the curing process. |
| Work area and substrate | The substrate should be dry and clean, i.e. free from foreign matter such as loose particles, oil and grease. The substrate should be free from condensing water which can be reached by keeping the temperature at least 3°C above dew point. |
| Product conditions | Stopaq® Polyester should be dry and the temperature should be above +5°C and preferably not beyond +30°C. |
| Calculation of material consumption | <p>Stopaq® Polyester is applied in straight wraps perpendicular to the pipe with the following overlap-dimensions:</p> <ul style="list-style-type: none"> – Circumferential overlap: ≥ 50 mm – Side-by-side overlap of consecutive pieces: ≥ 50 mm |

| Application instruction – Brief version | |
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| See specific Stopaq coating instructions for e.g. soil-to-air risers, field joints, pipe wrapping, coating of fittings, etc. | |
| Cutting to size | Take the roll of Stopaq® Polyester from its original package. Cut off the appropriate length. Immediately after cutting, the remaining roll of Stopaq® Polyester shall be stored into its original package to prevent premature curing. |
| Release liners | The inner release liner (blue) must be carefully removed from the Stopaq® Polyester prior to wrapping. In overlap areas, the outer release liner (colourless) has to be removed also. |
| Wrapping | <p>Start wrapping the cut piece of Stopaq® Polyester, complete the full circumferential wrap while applying slight tension and create a circumferential overlap of ≥ 50 mm.</p> <p>With consecutive wraps:</p> <ul style="list-style-type: none"> – circumferential overlaps shall be made alternatingly at opposite sides of the object. – side-by-side overlaps should be ≥ 50 mm onto the previously applied piece of Polyester. – overlaps should preferably be made on non-cured applied polyester. <p>Minimize air entrapment underneath the Polyester. An application roller may be used to shape the Polyester towards the contour of the coated object.</p> |

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| Compressing and fastening | Prior to curing the applied pieces of Stopaq® Polyester should be compressed and fastened by tensioned wrapping with Stopaq® Compression Tape on top of the applied Polyester. Compression tape should be spirally wrapped with an overlap of ≥ 50%. |
| Curing | Place UV-lamps - or, in case of curing by sunlight, the reflective mirrors - around the object coated with Stopaq® Polyester. Ensure that the entire coated surface will be enlightened. Switch on the UV-lamps; be careful not to look into UV-light sources without adequate eye protection! After curing time has elapsed, check for completion of curing. The cured Polyester shall feel hard. |
| Coating of Polyester | Stopaq® Polyester can be coated with various types of liquid top-coatings for esthetical reasons. It is then recommended to remove the Stopaq® Compression Tape and remainders of outer release foil. Please consult Stopaq B.V. for further information about suitable liquid top-coatings. |
| Sealing of coating transition area | Above ground situated coating transition area should be sealed against ingress of water (rain, condensation) by circumferential application of Stopaq® Sealing Tape. The Sealing Tape must overlap the coated Polyester and the original pipe coating. |

| Handling and commissioning | |
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| Handling before complete curing | Coated objects should not be exposed to loads before curing of the coating has completed. |
| Handling after curing | Cured coatings should not be exposed to excessive forces. Burying and commissioning is possible after full curing of Stopaq® Polyester. Backfill and compact using clean fill materials not containing foreign objects such as stones, hard lumps, etc. Such objects would otherwise cause excessive impact on the coating. |

| Information | |
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| 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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