

## STOPAQ® 4200 FILLER

### Product Information

**Generic type:** Non-toxic, single component, non-thermosetting injection filler. Stopaq® 4200 Filler has excellent adhesion- and penetration properties, a wide service temperature range, and is fully resistant to water.

**Product description:** The corrosion preventing, non-curing, surface tolerant Stopaq® 4200 Filler is designed for filling and protecting hard-to-clean or non-cleaned corrosion sensitive areas in narrow, difficult to access spaces such as gaps between flanges, around bolt threads in bolt holes, tank chime areas and around flange seals where water can accumulate. The material is suited for application with a hand operated, electric or pneumatic caulking gun, equipped with a flexible nozzle (supplied by Stopaq®), does not cure and is unable to build-up internal stresses. Due to the permanent viscous properties, Stopaq® 4200 Filler will during time, tend to flow out of the filled spaces. Therefore the filled gaps should be covered with additional Stopaq® materials such as Stopaq® Wrappingband CZH or Stopaq® Wrappingband EZ. For above ground flange application, additional mechanical protection should be installed, e.g. Stopaq® Flangebelt, Stopaq® Polyester, or UV-resistant Stopaq® Outerwrap PVC.

#### Features:

- Adheres on all dry substrates
- Easy to apply by injection tool (available separately)
- Surface tolerant
- Permanently fills the finest pores
- Resistant to temperatures down to -45°C
- Non-toxic
- Seals and stops active corrosion
- Blocks H<sub>2</sub>S gas
- Compatible with various types of existing coatings

#### Benefits:

- Harmless to environment and workers
- Permanent sealing of narrow spaces
- No special surface preparation and primers needed
- Cost- and time saving
- Unlimited shelf life and pot life
- Very long service life

**Product certificate:** Stopaq® 4200 Filler 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

**Between flanges:** Injection into the narrow spaces between flanges. Also flowing into the bolt holes, protecting the bolt threads and -shafts against corrosion.

**Flange gaskets - External:** Corrosion prevention of the outer rims of gaskets in flange fittings.

**Storage tanks – Chime area:** Protection of steel surfaces in gaps between the tank skirts and the concrete foundations.

**Bolt connections:** For protection of bolt threads and shafts in deep bolt holes (in steel as well as concrete constructions).

### Product properties Stopaq® 4200 Filler

<b>Colour</b>	Green
<b>Density</b>	1.2 – 1.5 g / cm <sup>3</sup> (NEN 1833)
<b>Temperature ranges</b>	Service: - 45°C to + 100°C During application – Substrate temp.: - 10°C to + 60°C
<b>Specific electrical resistance*</b>	> 10 <sup>8</sup> Ω.m <sup>2</sup> (EN 12068)
<b>Water absorption*</b>	< 0.07% (ASTM D570)
<b>Vitrification temperature*</b>	No changes @ -10°C to +30°C
<b>Adhesion*</b>	> 30 N / 10 cm <sup>2</sup> Cohesive fracture on steel, PP, PE and FBE No adhesive failure
<b>Resistance to thermal ageing*</b>	No change in properties (EN 12068)
<b>Resolved shear stress*</b>	> 400 Pa @ +30°C
<b>UV-resistance*</b>	Tested @ 17.5 GJ/m <sup>2</sup> (EN 12068): No change in properties
<b>Salt spray resistance</b>	Tested 720 h, 5% NaCl @ + 85°C (ASTM B117): No corrosion detected

\* according to KIWA BRL-K911/02

### General order information

<b>Product:</b>	Stopaq® 4200 Filler is available in various packing sizes:
<b>Art. Nr.</b>	<b>Packing size</b>
4210	Cartridge 0.53 k.; 20 pcs/box, 720 pcs/pallet
4225	Bag 2 kg, 9 pcs/box, 324 pcs/pallet
<b>Handling</b>	Handle with care, keep boxes upright
<b>Storage</b>	Store indoor, clean and dry. Storage temperature is not critical. Unlimited shelf life.

Application instruction: Preparation		Application instruction: Brief version	
<b>Tools, equipment and auxiliaries</b>	<ul style="list-style-type: none"> <li>– Caulking gun with 200 mm flexible nozzle</li> <li>– Application set for caulking gun</li> <li>– Measuring tape</li> <li>– Putty knife (blade width 25 – 40 mm)</li> <li>– Abrading pads, Scotch-brite type</li> <li>– Tube brush Ø 25 mm</li> <li>– Masking tape, width 25 mm</li> <li>– Personal protective gear like gloves, safety goggles</li> </ul>	<b>Caulking gun preparation</b>	Just prior to application, insert a pre-heated cartridge into the caulking gun. Apply the flexible nozzle at the opening of the cartridge.
<b>Additional materials</b>	Depending on type of application, various additional materials might be needed: <ul style="list-style-type: none"> <li>– Stopaq® Wrappingband CZH</li> <li>– Stopaq® Outerwrap PVC</li> <li>– Stopaq® Polyester</li> <li>– Stopaq® Wrappingband EZ</li> <li>– Stopaq® Flangebelt</li> </ul>	<b>Injection</b>	Shape the flexible nozzle in order to fit it into the gap to be filled. Push the nozzle as deep as possible into the gap and start injection of the 4200 Filler. Avoid air enclosures by keeping the tip of the nozzle in contact with already injected 4200 Filler. Gently pull out the nozzle while injecting. When the 4200 Filler becomes visible at the boundaries of the opening, the gap is filled completely.
<b>High humidity</b>	Stopaq® 4200 Filler can be applied in a humid atmosphere. The surface of the substrate however, should be free from condensing water which can be reached by keeping the temperature at least 3°C above dew point.	<b>Levelling and smoothing</b>	Use the putty knife for smoothing the surface and removal of excess filler. Remove the masking tape afterwards.
<b>Work area and substrate</b>	The substrate surface should be dry, clean and protected against negative weather influences.	<b>Application of covering materials</b>	Dimensions of covering materials should be sufficient to cover at least 50 mm of the adjacent substrate on all sides of the filled gap. In case of flange applications, the gap should be covered with Stopaq® Wrappingband CZH and additionally Stopaq® Flangebelt or Stopaq® Outerwrap PVC. In case of tank chime area, the gap should be covered with Stopaq® Wrappingband EZ. For other applications, please contact Stopaq b.v.
<b>Product conditions</b>	Stopaq® 4200 Filler should be dry and have a temperature between + 20°C to + 40°C for the ease of application. To achieve this, the cartridge can be placed in e.g. lukewarm water for 15 minutes.	<b>Visual inspection</b>	The 4200 Filler and the covering materials must look smooth and tight and should be shaped around all details and into corners.

Application instruction: Surface preparation		Bringing into service	
<b>General</b>	The area to be coated has to be clean, dry, and free from oil, grease, dust, poorly adhering old coating and loose particles. Several methods are suitable for cleaning purposes e.g. by scraping, wire brushing, high-pressure water jetting, vacuum cleaning, compressed air, etc.	<b>Exposure to loads</b>	Objects filled with Stopaq® 4200 Filler should not be exposed to loads from supports- or lifting equipment.
<b>Degreasing</b>	Degrease surfaces with isopropyl alcohol (cas. nr. 67-63-0)	<b>Commissioning</b>	Areas filled with Stopaq® 4200 Filler are fully protected against corrosion from the moment of application and can be commissioned immediately after completion of application.
<b>Salts and bacteria</b>	No need for additional cleaning	<b>Stopaq® information</b>	
<b>Condensation of water</b>	Prior to and during the application, the temperature of the substrate(s) must be at least 3°C above the dew point to avoid condensation of water.	<b>Documentation</b>	Extensive information is available on our website. Application instructions, "Stopaq® Technical Standard" and other documentation can be obtained from our head office, from our local distributor or by email to <a href="mailto:info@stopaq.com">info@stopaq.com</a>
<b>Steel substrate</b>	Clean the surfaces thoroughly by scraping, brushing, vacuum cleaning, etc. in order to remove loose particles (e.g. corrosion) as much as possible.	<b>Certified staff</b>	The application of Stopaq® sealing systems should always be carried out by certified personnel.
<b>Masking</b>	In order to keep surrounding surfaces clean e.g. for application of additional Stopaq® materials, it is recommended to apply masking tape on these surfaces prior to application of Stopaq® 4200 Filler.	<b>Stopaq® performance</b>	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 sealed with Stopaq® sealing systems.
<b>Visual inspection</b>	The substrates should be clean, dry and free of dust prior to application		



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