

Project Report/November 2023

Concrete Repair and StoFloor Traffic Elastic 590 EP for the KVN Lower Saxony Underground Car Park

KVN Lower Saxony in Hanover had the approximately 800 square metre underground car park below its building completely overhauled and refurbished. The floor slab had significant cracks due to decades of use and the original materials becoming fatigued with age. Crack injection is a proven renovation measure. The substrate prepared in this way can then be permanently coated.

After thorough crack analysis, the team of experts decided on **StoConcrete Inject IHS**.

The system is tested according to EN 1504-5 for closing, sealing and force-transmitting filling of dry cracks in concrete and reinforced concrete. Due to its low viscosity, it achieves a high penetration depth, has a high tensile strength and was mainly processed here using brush injection. It can also be processed with a wide range of packers.

The recommended hammer-in packer **StoJet P 110** has a diameter of 10 mm. The packer has a universal filler neck. It is suitable for force-transmitting and ductile crack injection as well as for filling. Crack injection with StoJet P 110 packer can be used for dry and wet cracks, both for filling with high pressure for interior and exterior application.

Properties **StoConcrete Inject IHS**

- EP injection system for closing, sealing, and force-transmitting filling of dry cracks
- Very good force-transmitting strength
- Two-component
- Soaking and injecting of crack
- High penetration due to low viscosity
- Solvent-free, not pigmented
- Applicable with hammer-in packer StoJet P 110

Following the concrete repair with StoCretec repair mortars, the underground car park received the crack-bridging OS 8 floor coating system **StoFloor Traffic Elastic 590 EP**.

The water vapor permeable system is particularly suitable for waterproof concrete floor slabs with rising damp. It is crack-bridging both statically (class A3 according to DIN EN 1062-7) and dynamically (class B 3.1 based on DIN EN 1062-7:2004-08).

The coating system thus protects the concrete floor from the ingress of water and pollutants dissolved in water – especially chlorides. This significantly increases the durability and cost-effectiveness of the parking garage. For example, it prevents possible follow-up costs that may arise through further repairs due to the use of crack bandages. Such later repairs can also significantly affect the visual appearance of the underground car park.

The high crack-bridging ability of StoFloor Traffic Elastic 590 EP coupled with its mechanical and chemical resistance, high alkaline stability and good bonding behaviour ensures long-lasting protection for the parking garage floor. This is confirmed by numerous long-standing references.

Properties of **StoFloor Traffic Elastic 590 EP**

- StoCrete EP multi-storey car park system
- Water vapour permeable
- Tested for rising damp
- Dynamically and statically crack-bridging
- Resistant to severe chemical attack
- Very good bonding strength properties
- Very good wear resistance
- Limited combustibility system build-up
- Radon-tight in accordance with IAF measurement (Radeberg, DE)
- Versatile colour spectrum
- Numerous long-standing references

Who & What

Project: Underground parking, Hanover, DE
 Investor: KVN Niedersachsen, Hanover, DE
 CU: Alfred Blöss GmbH, Hanover, DE
 Applicator: GEBOTHERM GmbH, Hildesheim, DE
 Realisation: 11/2022

StoCretec Competences: **StoConcrete Inject IHS**
 Injection resin StoJet IHS
 Hammer-in packer StoJet P 110

StoFloor Traffic Elastic 590 EP
 Primer StoPox GH 530
 Coating StoPox 590 EP
 Sealing coat StoPox DV 100
 Broadcasting StoQuarz 0,3 - 0,8 mm

Further products:
 Floor paint StoCryl BF 700
 EP water-based coating StoPox WL 100

Quick repair mortar StoCrete SM
 Quick repair mortar StoCrete SM P
 Corrosion protection StoCrete TK

Screed material StoCrete TG 108
 Bonding agent StoCrete TH 200

Photos: StoCretec







