

## **Silox®Injection 814nt**

Low viscosity epoxy resin for injection

**Silox®Injection 814nt is a special epoxy resin for consolidation of building materials with a small amount of binding agent and for crack and pore structure filling.**

**The material doesn't contain any solvents or blending products. Silox®Injection 814nt is a hard and tough material with excellent mechanical properties which hardens without shrinking. Silox®Injection 814nt contains a special anti corrosion additive and the adhesion on wet undergrounds is excellent.**

The sum of the positive properties: extremely low viscosity, excellent penetration ability, long processing time and safe hardening, also in thin layers, and low temperature outplays normal epoxy resins.

Silox®Injection 814nt is a typical product of our new product line NT, which means new technology which stands for: neither aggressive or irritant reactive thinners nor benzylalcohol.

The allergenic potential is therefore very low.

### **Application**

As 100% reactive liquid plastic which is solvent free, Silox®Injection 814nt is suitable for all classic sealing jobs where normal epoxy resins are used for.

Typical applications are contact grouting of wet or humid concrete cracks or joints. The resin is compared to other typical epoxy resins outstanding because of the substantial affinity. It infiltrates water films and thus displaces the water from the concrete and steel surfaces. The adhesion between resin and substrate is therefore optimal.

The extreme low viscosity and the excellent creeping properties make Silox®Injection 814nt to a first class product for contact grouting in case of cavities below bonded screeds or tiles. The long potlife in combination with low viscosity enables working with low pressure, which avoids damages caused by pressure build-up over the surface.

Fine concrete cracks or damages in other building materials could be filled and sealed with Silox®Injection 814nt. The excellent wetting properties and low viscosity make the application easy. e. g. stipple injection



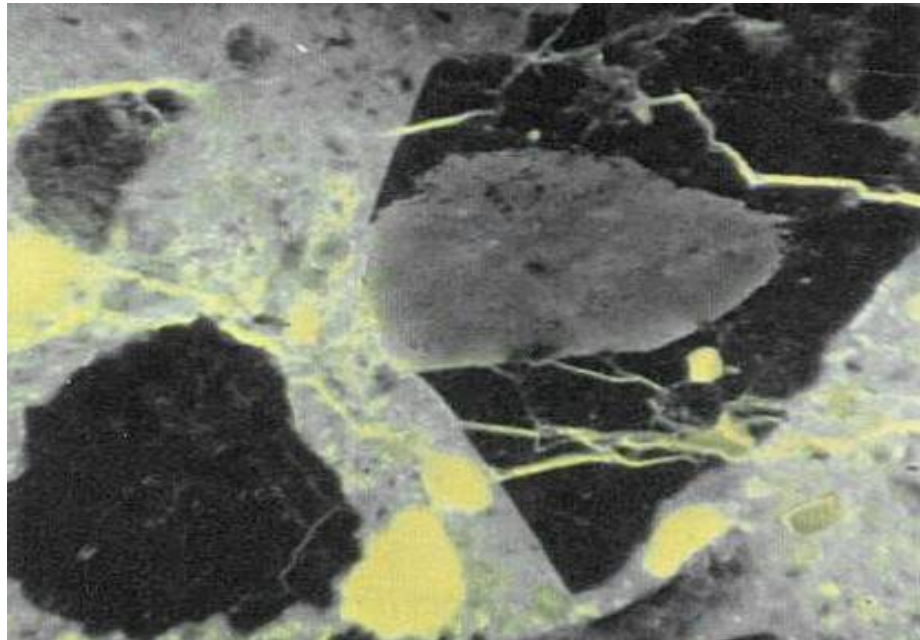
**The material is perfectly suitable for structure reinforcement such as brittle building substance, as well as strengthening of building materials or mortars with a small amount of binding agent, brittle natural stone or damaged wood.**

Saturation with Silox®Injection 814nt increases clearly the compressive strength and bending tensile strength. The original strength value of the treated parts will be regularly topped.

The adhesion of Silox®Injection 814nt on wet or damp mineral undergrounds is ideal. We recommend Silox®Injection 814nt for such applications.

<b>Properties</b>	Type	: Epoxy-Liquid resin with amine hardener
	Characteristic	: Liquid, transparent, nearly colourless
	Odour	: Like Amine (hardener component)
	MR Resin : Hardener	: 5 : 3 (100 : 60) Weight
	Viscosity	: 80-85 mPa.s
	Capillary rising	: 47,6 mm (glass capillary Ø 0,024 mm)
	Density (Mixed)	: Approx. 1,05 gr/ml
	Application time (t-Gel)	: Approx. 3 hours at 20°C
	Stick free	: Approx. 36 hours at 20°C
	Hardening	: Approx. 8 -10 days (in thin layers)
	Adhesion on concrete	: >1,5 k/Nmm <sup>2</sup>
	Chemically full loading	: 7d/20°C
	Degree of hardness	H3 / 7d/20°C
	Martens value	45° (30 d)
	E-Modul	2870 N/mm <sup>2</sup>
	Compressive strength	48 N/mm <sup>2</sup>
	Bending tensile strength	30 N/mm <sup>2</sup>

**Silox®Injection 814nt :**  
**Creeps into  
micro cracks,  
finest pores and  
capillary structures**



The mechanical values are determined on standard prisms (40 x 40 x 160 mm) of Silox®Injection 814nt and dried quartz sand (0.0-07 mm, MV 1:3) after 30 days storage at room temperature (20 °C).

**Processing** Silox<sup>®</sup>Injection 814nt is a typical epoxy liquid resin. The two components must be thoroughly mixed in the specified ratio of 5:2 before processing. Mechanical stirrers should always be used, simple manual stirring is not sufficient for homogeneous mixing. It is recommended that the mixed material be repotted as usual and stirred again briefly before use.

As with all reaction resins, the setting reaction of this resin is exothermic. The resulting heat of reaction leads to a considerable self-acceleration of the reaction and thus to a shortening of the processing time, if larger quantities of resin are mixed. The quantities of material should therefore always be adapted to the processing situation. Silox<sup>®</sup>Injection 814nt should not be diluted or mixed with other resins.

In principle, all commercially available injection equipment and methods are suitable for processing this epoxy resin. There are no special requirements for the materials of the pumps, seals, packers etc. used. We recommend our safety solvent HydroSolv<sup>®</sup>520 for cleaning the machines and equipment. If necessary, commercially available paint thinners can be used.

The known rules of technology for processing injection resins are also valid for this product.

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**Safety** Epoxy resins could irritate skin or cause allergenic reactions in case of sensitivity. The used polyamine and strong alkali in the hardener component are acidic to skin and mucosa. We recommend protective clothes and goggles and to keep the usual hygienic standards. The local law for the handling and application of epoxy resins are valid to this product.



In case of eye contact with the resin component or the ready mixture rinse immediately thoroughly for 15 minutes with water consult an eye specialist. With Silox<sup>®</sup>Injection 814nt contaminated skin should be cleaned with water and soap and creamed with a lipid regulation cream.

Please pay attention to the safety datasheet.

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**Storage Disposal** Quality and reactivity are not affected by prolonged storage of Silox<sup>®</sup>Injection 814nt. During severe frost the components may solidify to wax-like masses. By careful heating (e.g. in a water bath, not above 50°C!) this change can be reversed without loss of quality.

Silox<sup>®</sup>Injection 814nt contains no solvents, is not flammable, but combustible. This property must be observed during storage. The product must not be stored together with foodstuffs and must be kept in such a way that it is not accessible to children and unauthorised third parties.

Liquid epoxy resins and their hardeners must be disposed of as hazardous waste according to most national regulations and in accordance with the relevant (locally different for such products) regulations. This also applies to empty containers with product adhesions. The reacted product is harmless and can be disposed of together with household waste or building rubble.

## Recommended Auxiliary Materials

### **HydroSolv®520**

Is a highly efficient security solvent for PUR and epoxy machines with a high flash point. Not toxic or harmful to health, no labelling or transport limits required.

### **HydroMoll®522**

Efficient and cheap care and conservation material for PUR and epoxy machines. Suitable for machines and tubes. Stays inside until the next use and avoids sticking of material leftovers on valves and quad rings. No labelling required.

### **Trennfix®480**

Water-washable release agent to protect component surfaces from contamination with injection resins. Easy to apply by brushing or rolling up, similar to dispersion paint. Can be diluted with water.

### **Silipox®Baukleber 824**

Easy to apply epoxy resin-based adhesive and filler compound. Very good adhesion even on damp concrete. Suitable for fixing adhesive packers and also for perfect sealing of cracks.

### **SealFix®Expansionsmörtel 930**

For easy and fast sealing of injection holes. Perfectly waterproof, hydrophobic expansion mortar on cement basis, with special epoxy resin emulsion as mixing liquid. Cures without shrinkage. Processing with cartridge press.

These technical information describe the present-day state of knowledge these product. They should only inform about the possibilities of application and could not release the applicator of his commitment to check the possibility to use the product for the required application. Information for processing can be found in processing instructions of our product. Information about safe handling can be found in our current safety data sheet.

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**ARCAN Waterproof**  
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passion to invent 