ARCAN
Construction Products

Silox®EP 800

Epoxy resin for injection and reconstruction

Silox®EP 800 is an application-optimised epoxy resin for construction applications, preferably for renovation. The wide range of its positive properties -

- **Low viscosity, but solvent free**
- **Long pot life and although fast curing**
- **Very good bond, even on damp substrates**
- **Excellent penetration, even in the finest pores and structures**

- make Silox®EP 800 to an all round useable material and problem solver for the user.

Application

The most typical applications are contact grouting of joint and cracks in concrete structures through packer injection, hose injection or trickle operation.

By injecting and impregnating the microstructure with Silox®EP 800, the compressive and tensile strength of masonry with insufficient load-bearing capacity or of compressed concrete is significantly improved. In fair-faced concrete, cracks (including hairline cracks) are safely filled by trickle injections of Silox®EP 800 and sealed in such a way that no pollutants penetrate which could damage the concrete or reinforcing steel.

Hollow composite screeds or slabs (even on facades!) are stabilised by low or (safer and better) vacuum injection with Silox®EP 800 and permanently bonded to the substrate.

Industrial floors, floor surfaces in car parks, garages or similar surfaces can be impregnated or sealed by single or multiple treatment with Silox® EP 800. This produces highly abrasion-resistant, dust-free and liquid-tight surfaces.

Mixtures of (dry) quartz flour or sand and Silox®EP 800 give synthetic resin mortars with extremely high strength. Such mortars are typically used for repairing damaged concrete floors, grouting anchor bolts or machine foundations, as trowel-laying adhesive repair mortar and similar applications where high strength and contact grouting between concrete, stone and/or metal is required.

Properties Processing

Silox®EP 800 is a classic „2 component system" composed off resin and hardener. After mixing the two components, they react to a ductile-hard epoxy polymer. The mixing ratio off the two components (resin „A", hardener „B") is 2:1 (according to volume).

For processing both components must be thrown into a clean and dry pot. After that the components need to be mixed with a mixer (for example a drill machine with an propeller) until the compound is mixed homogeneously. Manually mixing is not enough. The material can be worked up directly after mixing.

Important: Always mix only as much material as in manageable time is processable. The direct reaction between resin and hardener after mixing is exothermic (setting warmness free). An acceleration of the reaction by its own is activated through the warming. The processing time of bigger compounds is shortened thereby dramatically. Also the processing time is influenced (shortened) by high environmental temperature and material temperature. Low temperatures inhibit the hardening process of EP resins. Environmental temperature below ≤ 5°C stop the reaction process.

The resin is processable with all usual pumps and squeezers. The material can also be served up to surfaces with plush roller, through usual spray technics. It has no special needs to the materials of the machines and the equipment.

Not hardened Silox®EP 800 is soluble in esters and ketones and aromatic hydrocarbons. Not adaptable for solving and rinsing are aliphatic hydrocarbons (for example test benzine) and water. For rinsing of the working machines should no mixed solvent (lacquer thinner and nitro thinner) be used.

Hardened epoxy resin can only difficult be solved and removed from surfaces. Adjacent parts should be saved during the working process of soiling by Silox®EP 800. Soiled parts shall be cleaned immediately.

Silox®EP 800 is not attackable by concrete contents. Silox®EP 800 can not be attacked by substances of content just as well Silox®EP 800 has no components which will attack concrete or reinforcement. Ground- and drinking water will not be polluted by getting in contact with Silox®EP 800. The product is certificated by the "KTW-instructions" (plastic and drinking water)

Technical Data

Delivered Product	**2 components**
Mixing ratio	**2:1 (A:B) by volume**
Density (compound, workable)	**1,03 gr/ml at 20°C**
Viscosity (compound, workable)	**145 m +/- 50 mPa.S at 20°C**
Processing Time (tGel)	**40 - 50 Minutes at 20°C**
Working temperature	**Approx. +8 + 35 °C**
Elongation	**Approx. 10%**
Danger labelling EP 800 A	**Xi (irritant); N (environmentally hazardous)**
Danger labelling EP 800 B	**C (Corrosive)**
ADR - Danger label	**Resin (A) class 9 hardener (B) class 8**

Work safety

Epoxy resins can cause skin irritation and trigger allergies in sensitive people. The polyamines used in the hardener components are strong bases and have a corrosive effect on skin and mucous membranes. We recommend to wear protective clothing and goggles during handling and processing and to observe the usual industrial hygiene standards. The national regulations, e.g. of the trade associations, for handling epoxy resins and processing of injection materials also pertain to the present product.

In case of eye contact with the basic components or the injection mixture, always rinse with plenty of water for 15 minutes, then consult a specialist immediately. Skin areas wetted with Silox®EP 800 should be washed immediately with soap and water and treated with a moisturizing skin cream.

The vapor pressure of the aliphatic diamines used in the B component is low. Nevertheless, reactions cannot be excluded in people who are allergic to contact with amines (diamines). People who are hypersensitive to amines should therefore not work with epoxy resins (or their hardeners), this also applies to this product

Storage Disposal

Quality and reactivity are not affected by prolonged storage of Silox®EP 800. In case of frost the components can 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®EP 800 contains no solvents, is not flammable, but is combustible. This property must be observed during storage. The product must also not be stored together with foodstuffs and must be kept in such a way that it is not accessible to children and unauthorized third parties.

Liquid epoxy resins and their hardeners are hazardous waste according to most national regulations and must be disposed of 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 accessories

HydroSolv®520
A highly efficient cleaning and rinsing agent for PU- and EP- injection machines and hoses. HydroSolv®520 is environment-friendly safety solvent with a high flash point. It is non-toxic or harmful to the health. There is no need for identification letters and HydroSolv®520 has no transport restrictions.

HydroMoll®522
Efficient and low-prized cleaning and rinsing agent for PU- and EP- machines and hoses. HydroMoll®522 is a combination of solving additives and special softeners. After using, it can stay in the machine, so it prevents bonding of valves and gaskets. There is no need for identification letters.

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