



SiliBond®LSI 725 Inorganic stone and plaster stabiliser

SiliBond®LSI 725 is a reactive silicate binding agent ready to use. Through climatic influences affected mineral building substances receive new and similar (silica based) binding agents. The natural structure of the original substances will be preserved.

SiliBond®LSI 725 consists of special silicates and silicate nanoparticles dissolved in water. During application, the water-like, low-viscosity product is absorbed through the capillaries of the building material, reacts with the calcium ions contained in the building materials and with CO₂. Calcium silicate hydrates and silica gel (SiO₂aq) are formed as reaction products.

SiliBond®LSI 725 is an excellent binder for mineral substrates. During the setting reaction of the purely inorganic product, no solvents or other toxic or environmentally harmful substances are released.







The calcium silicate hydrates and silica gels (as a non-crystalline form of quartz) that are formed as reaction products are natural binders with high resistance. They provide the building materials treated with them with strength without the formation of a shell - as is the case when impregnated with synthetic resins, for example.

The hardening process is relatively quick. The predominant part of SiliBond®LSI 725 will be converted within 1 - 2 days into the building material, this takes place under normal circumstances. (20 °C / 50% relative humidity) The desired final strength effect is therefore achieved very quickly.

Important

The hardening reaction of SiliBond®LSI 725 also **does not produce any water-soluble by-products which could lead to efflorescence on the surface of the building materials!** And - SiliBond®LSI 725 does not create films. Pores are not clogged. When used professionally, the formation of shells or crusts is absolutely impossible.

SiliBond®LSI 725 - All advantages at one glance

	1 component system- easy application
	Ideal penetration power based on low viscosity
	Dries absolutely tack-free and without film formation - no contamination
	Pure mineral binder - similar to the building material
	Silicates are acid-resistant - so they also resist acid rain
	And - the treated building material remains permeable to water vapour

SiliBond®LSI 725 does not contain any other additives, also no hydrophobing agents and no ingredients that could attack or damage building materials. The natural vapour diffusion of the building material is not affected by the treatment with SiliBond®LSI 725.

SiliBond®LSI 725 is (and remains!) absolutely colourless. The natural colour of the building material won't be changed or intensified through the treatment with the impregnation material.

SiliBond®LSI 725 is used mainly for strengthening and repair of damaged building materials such as absorbent stones, plaster, joint mortars or concrete. SiliBond®LSI 725 is not recommended for bricks and similar ceramic building materials, hard natural stones and all building materials with only low capillary absorption capacity.

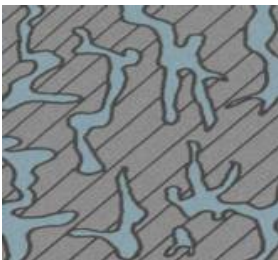
The impregnation with SiliBond®LSI 725 restores the original density and strength of the building material without reducing its natural porosity and thus its ability to diffuse water vapour.

Processing Consumption

The application and processing of the product depends on the damage to the substrate. For a successful repair, it is therefore necessary to first analyse the condition of the substrate to be strengthened (type of stone or binder, salt content, moisture, porosity) to determine the necessary work steps and material requirements. For this purpose, a sufficiently large sample area should always be created in order to be able to assess the success of the work in advance of the repair.

Dirty areas must be cleaned before impregnation. In principle all cleaning methods are suitable, whereby care should be taken that the selected cleaning method does not cause additional damage to the building material.

After cleaning follows strengthening. The surface must be air-dry and absorbent to guarantee the complete saturation of the weathered substrate with SiliBond®LSI 725. The treated surface should be protected from rain for at least 12 hours after the treatment. The surfaces should not be heated up by direct sunlight before impregnation to avoid "burning" of the impregnation in the area of the surface. On warm surfaces, the water evaporates too quickly, so the product does not penetrate deep enough.



Ideal processing conditions are temperatures between 10 and 20°C, at a relative humidity < 75%

SiliBond®LSI 725 is applied to the building material by spraying or flooding. This is the only way to ensure that the product penetrates the building material sufficiently deeply and not just a thin layer on the surface.

For large-area applications and for all highly absorbent surfaces, it is advisable to work in several steps - if necessary "wet in wet" - and to dilute the material with clean water. The degree of dilution depends on the suction behaviour of the building material, we recommend a dilution of 1:1 for the first working step.

A prerequisite for successful consolidation is that the damaged building material layer is saturated with SiliBond®LSI 725 right down to the healthy core. This is the only way to prevent the formation of binder-rich shells on insufficiently strong intermediate layers and - as a consequence - spalling due to thermal stress.

When repairing brittle masonry, which often does not suck evenly, it may be necessary to work in smaller partial areas (if necessary even stone by stone). SiliBond®LSI 725 is applied thickly and always "wet-on-wet" until the material is no longer absorbed by the substrate. If necessary, a second treatment can be carried out after 6-12 hours of waiting time, again aiming at a complete impregnation of the damaged layers of the building material.

The amount of SiliBond®LSI 725 required for stabilisation naturally depends on the existing substrate and the degree of damage. The consumption can be between 0.5 and 15 kg/m². The specific material requirement for an object must therefore be determined individually and only with a test surface.

**After treatment
Painting
Hydrophobising**

The surfaces stabilised and strengthened with SiliBond®LSI 725 can be reworked with stone replacement compounds, coated with mineral silicate paints or hydrophobised after the silica gel deposition has subsided. If SiliBond®LSI 725 is only applied after the application of the stone replacement compounds or the mineral-silicate paint, a waiting period of at least 4 weeks is necessary.

Hydrophobising

The conclusion of any restoration should be a waterproofing, i.e. protection against rain. We recommend HydroBloc®Si 742 - a water based silicon product - which is extremely good compatible with SiliBond®LSI 725.

Properties

Composition	Silicium dioxide, water, additives and auxiliary materials
Active ingredients	25 %
Density	Approx. 1,26 gr/ml at 20°C
Viscosity	Approx. 30 mPa/S at 20°C
Colour	Straw colour, slightly opaque
Flash point	Not applicable

**Environment
Storage
Safety at work**

SiliBond®LSI 725 is very environmentally friendly. The product is purely inorganic. During processing and setting of SiliBond®LSI 725 no alcohols or other organic substances with toxic and/or climate-damaging potential are released.

Silibond®LSI 725 is the VOC-free alternative to classic stone hardeners based on ester and silica acid (KSE).

SiliBond®LSI 725 is not toxic, but reacts alkaline. This fact must be taken into account during storage and handling. The product must be protected from frost and stored in such a way that it is not accessible to children and unauthorised third parties. It must not be transferred into aluminium or zinc containers. Contact with acids must be avoided.

Always wear protective clothing, gloves and goggles during processing!

Adjacent components, window panes, painted surfaces and parts made of aluminium must be protected against soiling with SiliBond®LSI 725. When applying by spraying, the risk of wind transport must be taken into account!



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.

ATI-Silibond®LSI 725 |12|2019
© ARCAN GmbH
All rights reserved

ARCAN Waterproof
ARCAN GmbH Spezialbaustoffe

Kleinniedesheimer Strasse 19
D-67240 Bobenheim-Roxheim
Phone: +49 (0)6239 - 99 78 20
Mail: office@arcan.biz
Web: www.arcan.biz

passion to invent 