

General

Herkulit® is mainly used on floors where there is a high level of requirements for durability, easy maintenance, good long-term economy, and a rustic appearance.

Herkulit® is used primarily in industry, shopping centres, public premises, galleries, offices and parking garages.

Herkulit® S400 is a natural, environmentally-friendly material. The material is not diffusion-proof, cannot be damaged by water and is also anti-static. Installation does not require the use of environmentally hazardous additives.

Herkulit® S400 is a 15-25 mm surface course that binds to both old and newly hardened concrete. The wear course is designed to provide problem-free functionality in extreme industrial environments or in premises where hygiene is important. This type of floor normally lasts for more than 30 years even in locations heavily used by vehicles such as trucks. Floors in old premises are renewed by applying Herkulit® S400. And can be used to renew an entirely worn out floor or to upgrade a premises. In both cases a floor refurbishment is a qualitative, practical and cost-effective alternative to removing the existing concrete floor.

Herkulit® S400 prevents chlorides and other harmful substances from permeating into the concrete base. (Herkulit® S400 acts as an environmentally friendly protection for the concrete base.) Repairs to the existing concrete surfaces stops carbonation and decomposition of the structural concrete. In addition the product is completely frost resistant.

The installation should be carried out by an experienced, qualified contractor. A surface course that is laid on a subfloor with no seams produces a perfect, problem-free floor covering. This combination reduces the need for seams in the floor by up to 80% compared with ordinary concrete flooring, and thereby also reduces the cost of repairs and maintenance in the future.

A seam-free concrete base can be created by adapting the concrete and the work in order to optimise the function of the concrete floor, instead of compromising due to the design of the building and the installation technique.

This is made possible by laying the subfloor at an early stage in the construction process and laying the surface in an indoor environment at the end of the process. This also guarantees tolerances and surface finish, both of which are directly governed by the environment in which they are poured and laid, saving both time and money.

Project planning instructions

Carrying out the work:

The work is divided into five main elements

- Blasting
- Laying
- Trowel and finishing
- Curing
- Treatments

Conditions at the workplace:

When laying Herkulit® in situ, the workplace must have a constant temperature of at least +10°C at the surface of the concrete, and be free of drips and draughts.

Technical data:

The following properties are typical average values and should not be regarded as minimum or characteristic values. All properties are at +20°C.



Type Herkulit® S400:

Compression strength in N/mm ² after 28 days	120 N/mm ²
Tensile strength in bending in N/mm ² after 28 days	12 N/mm ²
Abrasion resistance according to EN 13892-4, AR 0,5 (2850 rev)	0,00 mm

Description:

To achieve a satisfactory result when laying Herkulit® S400 it is important that the concrete base is of good quality. The surface and structure of the concrete base is crucially important for the adhesion of the top layer. If there is any doubt as to whether the concrete base can meet the set requirements, a site test or a tensile strength test should be carried out, or if necessary cores should be drilled out for closer analysis.

Requirements:

To ensure that Herkulit® S400 can function optimally, the concrete base must comply with the following requirements:

Adhesion:

The tensile strength in the surface should be 1.5 MPa (15 kg/cm²) at the time of laying Herkulit® S400. (For more information read surface preparation).

The surface:

The surface should have a structure equivalent to a minimum of 2 mm/ max 30 % of the thickness of the top layer.

The surface should be free of slurry and cement film as well as impurities.

Flatness:

The concrete base should be sufficiently flat that the thickness of Herkulit® S400 can be kept within the given margins (15-25 mm).

Guidance:

If the concrete base has a tensile strength of at least 35 N/mm² and is otherwise of good quality and free of impurities, it can be expected that the above requirements for adhesion will be met after milling, or alternatively blasting and cleaning the surface.

For new production

Lay the concrete base using vibration to achieve a level and homogenous surface. Do not overwork the surface so that slurry appears on the surface of the concrete base. The slump of concrete and working methods directly affects surface tensile strength. When using higher concrete slump you need to increase concrete quality. Any inclines towards drains must be executed in the concrete base before laying the top layer. The concrete base should be sufficiently flat that the Herkulit® S400 is within the acceptable tolerances (value 15-25 mm).

The surface should be prepared for milling/blasting (fine trowelled surface)

Never use wax or solvent-based moisture-curing on the concrete base.

All details of the floor structure should be decided. Before laying the concrete base. The concrete base must be laid on a flat and stable base course that will have to withstand the loads that are conveyed to it.

Levelling:

The surface around seams and cracks must be as level as possible when laying Herkulit® S400.



Seams

Herkulit® S400 floor binds at the concrete base and does not require seams.

Seams in the concrete base:

We recommend sawing grooves in new floor coverings over old seams that are moving.

Milling/blasting:

Mill the surface. The surface structure should be equivalent to a minimum of 2 mm/max 30 % of the thickness of the top layer, otherwise blast the surface. The surface should be free of slurry and cement film. Milling/blasting should be carried out over the entire surface, as well as in the vicinity of walls, pillars etc. If it is not possible for the machines to access right to the edges, this is done by hand. Before milling the existing concrete base any cracks, rising edges, old seams etc. should be repaired.

Cleaning the surface:

After milling the concrete should be cleaned thoroughly by means of vacuuming, high pressure flushing etc., depending on the cleanliness and structure of the surface.

Applying water and covering:

If the concrete base is not saturated with water after cleaning, water should be applied to it. Depending on the temperature conditions and the density of the concrete it is recommended that application of water should commence 8-24 hours before laying the primer. Uncover the surface concurrently with pouring. If there is any free-standing water, it must be vacuum dewatered before priming.

Colour:

Basic colour: grey. Pigments are added for other colours.

Choice of colours

There is a free choice of colours for Herkulit®. Take into account the fact that pigmented cement-based products cannot be compared with colour codes for paint.

- Light colours should be avoided on surfaces that are frequently made dirty.

Seams, patterns

Can be sawn and filled as required

Protecting finished surfaces

Herkulit® S400 surfaces that are completed before the building is finished should be covered for protection and kept covered during the final installation. Herkulit® S400 is concrete and at first it therefore absorbs both water and waterborne dirt. The covering material should be waterproof and non-colouring, e.g. waterproof board.

Surface finish

Natural efflorescence occurs during the initial period of use, producing a dull surface. To remove this, treat the surface immediately after removing the moisture-curing film. Use Lithurin® Hard & Stain Wash in a combi scouring machine to remove a large amount of efflorescence. (Refer to cleaning instructions for more information).



Cleaning:

Clean floors with soap of the Concrete Soap® type. Mix at a concentration of approx. 100:3.

The greyiness (the efflorescence) will vanish in line with the regular cleaning and the Herkulit® S400 surfaces will become more liquid-repellent and acquire their finished gloss.



ab lindec® endeavours to provide correct information about technical properties and handling of its products. However, while ab lindec® has no control over the way in which the products are mixed and laid, or the conditions under which they set, ab lindec® can in no way be held responsible. ab lindec® is only responsible for the quality of the products at the time of delivery.