

# Brecopac-Plan

The heavy-duty industrial flooring system



## Technical data

### Prerequisites for the substrate

Fillings according to ZTVE StB 94,  $E_{v2} \geq 100$  MN/sq.m. and  $E_{v2}/E_{v1} \leq 2,5$  tested and proved by the customer  
Fine sub-surface and recompaction by arrangement

### Conditions for installation

**Brecopac:** minimum temperature of 0°C  
Roof sealed in order to be rainproof as far as possible  
Frost-free load-bearing layer

**Brecoplan:** minimum temperature of + 5°C  
The roof and external facade must be sealed so that they are rainproof and draughtproof  
Frost-free floor slab

### Daily output

**Brecopac:** 1,500 to 2,000 sq.m./day & team

**Brecoplan:** 800 to 1,400 sq.m./day & team (depending on the section of superficial area and the length of the access routes from the mixing yard)

### Installed thickness

**Brecopac:**  
standard version: average of 18 cm;  
Special versions: up to 25 cm is possible

**Brecoplan:** 1.0 to 2.5 cm  
(greater installed thicknesses are possible)

### Planeness (flat and level surface)

**Brecopac:**  
according to DIN 18202, point 5, table 3, line 2

**Brecoplan:**  
according to DIN 18202, point 5, table 3, line 3, special planeness acc. to DIN 18202, line 4, or acc. to DIN 15185 is possible (extra price)

### Brecoplan's resistances

Resistant to water, fuels and mineral oils (further resistances on request)

### Loading capacity

Uniformly distributed loads of up to 100 KN/sq.m. for the standard version. Point loads of up to 60 KN/sq.m. are possible from the shelf supports of customary shelving systems. The floor slab's thickness can be reinforced for higher loads. The customer must commission an expert's soil report to provide proof of the loading capacity and settlement behaviour in special cases and difficult foundation conditions.

### Brecoplan's prism strength

Compressive strength: > 50 N/sq.mm  
Bending tensile strength: > 10 N/sq.mm

### Electrical conductivity

Between  $10^6$  and  $10^7$  Ohms following the example of DIN EN 1081. No static charge. Suitable for explosive areas in zones 0, 1, 20 and 21 according to the German workplace regulations. (Permissible maximum value:  $10^8$  Ohms)

### Brecoplan's thermal conductivity

1.4 W/(mK) should be applied as the arithmetic value

### Brecoplan's combustibility class

Class A1

## Description of the system

**A double-layered industrial flooring system consisting of a floor slab laid on the ground, constructed with the special rolled concrete installation process and formulas as well as a synthetically modified, composite cement, industrial flooring.**

### Surface

- slip-resistant,
- natural grey colour, (the surface structure is subject to the influences of craftsmen and building physics)

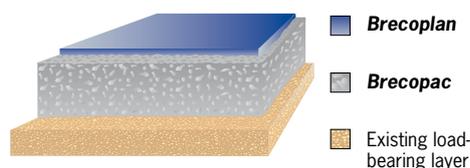
### Properties

- heavy duty and a high degree of planeness
- resistant to water, fuels and mineral oils
- low shrinkage and low cracking
- antistatic
- **Brecopac:** largely jointless on the surface. Concrete press joints on the daily laid bays. Peripheral joints around projecting components. Possible rail joints for impact stresses caused by the construction
- **Brecoplan:** jointless on the surface. Peripheral joints around projecting components, if needed. Building expansion joints must be secured by suitable joint profiles
- Systematic solutions are possible for door thresholds, at transitions and connections with components resting on different foundations

## Fields of application

- Production operations
- Warehouses and distribution halls
- Workshops
- Trans-shipment operations
- High-density storage racks
- Printing shops
- DIY markets and wholesale markets

## Systematic construction



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## The customer's preparatory work

The minimum demands according to ZTVE StB 94 are placed on the substrate for constructing the **Brecopac** floor slab.

In other words, coarse-grained filling material like filling gravel, gravel, sand, hardcore or recycled material must have an  $E_{v2}$  of  $> 100$  MN/sq.m. and a ratio of  $E_{v2}/E_{v1} < 2.5$ .

If minus temperatures must be expected during the period when the work is desired to be done, then the customer must ensure that a minimum temperature of 0°C (**Brecopac**) and +5 °C (**Brecoplan**) - also at night - will be guaranteed in the area to be laid and the mixing yard during the laying time and curing time.

A plane (flat and level), paved or passable mixing yard of approx. 500 sq.m. (**Brecopac**) and approx. 300 sq.m. (**Brecoplan**) is required.

An electrical power connection of 63 A (protected with 80 A, if at all possible) and a water connection with a C pipe coupling (a standard pipe with a meter and hydrant, if necessary; **Brecopac**) or with a ¾" coupling (**Brecoplan**) must be provided.

## Brecopac floor slab

The fine sub-surface and the recompaction according to ZTVE StB 94 will be constructed with an accuracy of + 1 cm by agreement, after checking and inspecting the height of the load-bearing layer provided by the customer, so that a permanent thickness which is as even as possible can be guaranteed for the **Brecopac** floor slab.

The **Brecopac** floor slab is constructed jointlessly as an unreinforced floor slab with large daily-laid bays, which lies on the ground over the customer's load-bearing layer. **Brecopac** is mixed with specially dosed, quality-controlled additives of a slightly moist consistency, in order to achieve a floor slab with low shrinkage to take **Brecoplan**.

**Brecopac** is smoothed flat and pre-compacted with the aid of ultra-modern laser technology. The recompaction takes place by means of double vibrating rollers or vibrating plates during the next phase.

Daily output: approx. 1,500 to 2,000 sq.m. The thickness varies between 18 cm and 25 cm according to the loading.

## ADVICE:

The requisite care has been taken when compiling the technical data for the company's products. Nevertheless, all recommendations or suggestions that are given with reference to the utilization of these products are offered without any warranty because the conditions under which the use takes place lie beyond the company's influence. It is incumbent on the customer himself to check whether the products are suitable for the respectively intended use and whether the conditions of use are reasonable for the respective product.

## Brecoplan covering layer

The jointless **Brecoplan** covering layer, which is also designed to have a low shrinkage by means of special formulas and installing techniques, is coordinated with the **Brecopac** floor slab.

**Brecopac** comprises a mixture of sand, cement, fine stone chippings and a synthetic dispersion that is modified in our own factory, which is constructed directly on the building site by using a special positive mixer.

The **Brecoplan** is laid with a laser-controlled smoothing machine, which pre-compacts the **Brecoplan** evenly and thus guarantees a high degree of planeness, after the substrate has been prepared by means of a high-pressure water jet with grinding and following the application of an adhesive bridge and adhesive slurry. The subsequent smoothing operation takes place with rotating, dual, smoothing machines.

A minimum temperature of +5°C is required for the laying of **Brecoplan**. The installation's areas must be sealed so that they are rain-proof and draughtproof. The effects of draughts and water must be avoided for the first 38 hours.

Daily output: approx. 800 to 1,400 sq.m. (depending on the section of superficial area and the length of the access routes from the mixing yard)

Standard thickness: 1.0 to 2.5 cm (greater installed thicknesses are possible)

Planeness (flat and level surface):  
DIN 18202, point 5, table 3, line 3

The **Brecoplan** can also be laid according to DIN 18202, line 4 for special requirements, or laid according to DIN 15185 in the area of traffic lanes or aisles between high-density storage racks (extra price).

## Note

The DFT industrial flooring systems are constructed to be largely jointless on the surface. Cracks cannot be avoided generally for reasons of building physics or construction: however, these hardly ever lead to damage on account of the low-shrinkage concept and the special characteristics of the DFT industrial flooring system.

## Drying time and curing time

The drying time and curing time of the DFT industrial flooring system depend on the substrate's temperature, the substrate's moisture content, the air temperature, environmental temperature and the relative air humidity.

The floor is passable after approx. 2 to 3 days at an average air temperature of 20°C and an average relative air humidity of approx. 65%. It can be travelled over by lightweight forklift trucks and mobile equipment after approx. 4 to 5 days and it can be loaded after approx. 8 to 10 days. (Please coordinate with DFT's site management)

## The following supplements to the package of work can be offered at the customer's request.

- Installation of fillings and non-binding, granular, sub-base layers
- Reinforcement of the **Brecopac** floor slab up to 25 cm for high structural loadings and stresses
- Construction on the customer's floor-heating system
- Construction including supply and installation of a floor-heating system
- Laying of the **Brecoplan** covering layer according to DIN 18202, line 4m or according to DIN 15185 in the areas of traffic lanes or aisles between high-density storage racks
- Initial cleaning and maintenance with our **Latanol** products
- Connection between areas at doors, gates and overhead loading platforms, or formation of joints by means of installing DFT steel anchor plates



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