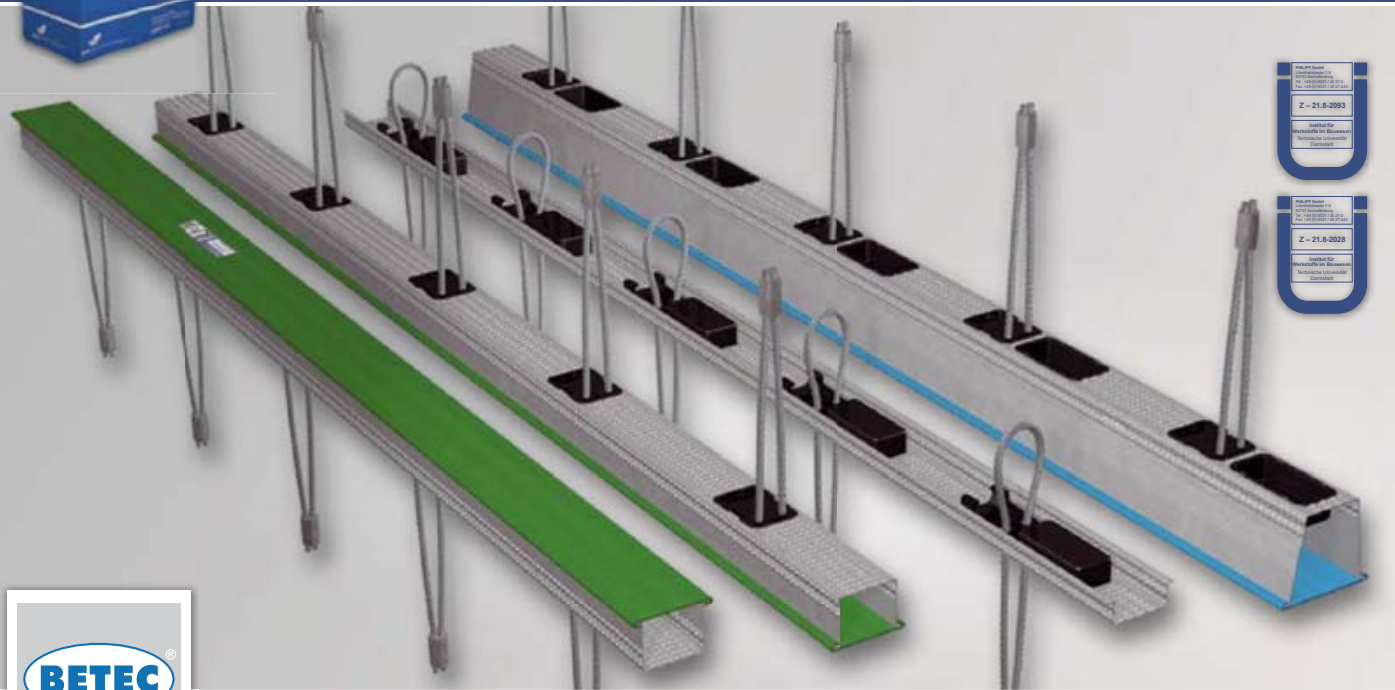


PHILIPPGROUP



PHILIPP - BETEC® Grouting mortar



VB3-V-012-en - 01/19 - PDF



for the Power One and Power Duo System

Technical Data Sheet

PHILIPP - BETEC® Grouting mortar

The system-approved, high-quality PHILIPP - BETEC® Grouting mortar is ready for use and consists of approved materials. More details can be found in the German approval (no. Z-21.8.-2093 / Z-21.8.-2028).

Application

The PHILIPP - BETEC® Grouting mortar connects precast concrete elements to each other permanently and force-fit via integrated, approved Power One or Power Duo rails.

Properties

- Due to a controlled volume increase the mortar is shrink-free and guarantees a force-fit connection.
- Cement-bound and free of chloride.
- Conform to fire resistance class A 1 (non-combustible).
- High flowability, homogeneous and void-free grouting of the joint.
- High early strength with a low W/C - ratio.
- Strength class C 60/75.
- Very good and easily pumpable.
- Very high surface adhesion to steel and concrete.
- High resistance to frost deicing salt.
- Resistant against: XO;XC 1,2,3,4; XD 1,2,3; XS 1,2,3; XA 1,2;XF 1,2,3.
- Waterproof.

Processing



Following processing instructions are only for information. Please refer also to the information given in the Installation Instruction and the approval of the Power One or Power Duo system.

1. Pre-treatment

The grouting mortar is ready for use. Only water has to be added. Before grouting the concrete surface has to be cleaned and watered until the water saturation is reached, stagnant water must be removed. Remove all needless cement slurry, the capillary pores of the concrete must be open.

2. Mixing

The PHILIPP - BETEC® Grouting mortar has to be mixed with the water amount specified on the packaging. Either in a compulsory mixer (and then pumping of the mixture) or a suitable continuous mixer the mixing is done. The mixing time in a compulsory mixer is approximately 4-5 minutes. First, 4/5 of the required amount of water is filled in, the powder component is added, the mixture is mixed for approx. 2-3 minutes and then the remaining water is added until the consistency wanted is reached and a homogeneous mortar matrix is present.

3. Post-treatment

The mortar surface must be protected against too fast drying by suitable measures (e.g. cover with jute bags) for approximately 3 days. Low temperatures prolong the processing time and retard the early strength, high temperatures accelerate the progress of the early strength and reduce the processing time.

Consumption

One bag (25 kg) of ready-mixed mortar becomes approx. 13 litres of green mortar.

Storage

Dry, frost-free and in originally closed bags the powder has a storage life of 12 months.

Packaging

25 kg strong paper bag, 40 pieces = 1,000 kg per euro-pallet (wrapped with foil).

PHILIPP - BETEC® Grouting mortar

Technical data		
All data determined at +20°C		PHILIPP - BETEC® Grouting mortar
Range of grading curve	[mm]	0 to 4
Compressive strength class		C60/75
Green mortar density	[kg/dm ³]	ca. 2.2
Swelling measure	[Vol-%]	≥ 0.1
Processing time (20°C) (depending on temperature) ①	[min]	≥ 30
Processing temperature (concrete element temperature) ②	[min/max]	+5°C / +30°C
Maximum amount of water ③	[Litre/25 kg]	2.6 litres at 20°C 2.9 litres at 5°C 2.3 litres at 30°C (see information on bag)
Calculation quantity	[kg/m ³]	approx. 2.050
Consistency		highly flowable
Compression strength after 24 hours ④	[N/mm ²]	ca. 40
Compression strength after 28 days ④		ca. 95

① With temperatures lower than +5°C specific measures in winter time must be started.

② Low temperatures prolong the processing time and retard the early strength, high temperatures accelerate the progress of the early strength and reduce the processing time.

③ Drinking water quality, depending on the temperature and further boundary conditions the water content can be chosen +/- 0.1 litre per packaging, in order to control the slump.

④ Storage of the test specimen according to DIN EN 196-1, the strength values are average values from the production control.



Please refer to the approval and Installation Instruction of the Power One System and the Power Duo System. These can be found at www.philipp-group.de or are available on request.



The PHILIPP - BETEC® mortars can be supplied from:

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The data given in the data sheet, the application-technical guidance and other recommendations are based on extensive research and experience. However, they are not binding and do not absolve the customer to check the products and procedures regarding their applicability for the intended use. All data are only a suggested guideline and tested by +20° C temperature.

Notes

