

PHILIPP GROUP



PHILIPP - P&T Grouting mortar



for the Power Duo and Power Box System

Technical Data Sheet

PHILIPP - P&T Grouting mortar

The grouting mortar is a ready-for-use dry mixture made of high quality cement (DIN 1164 / EN 197), of naturally round quarzitic aggregate (DIN 4226-1) and approved concrete admixtures (Z-0921-BPR-2009).

Application

The grouting mortar creates with precast concrete elements and integrated, approved connection system (Power Duo and Power Box) a force-fit and permanent connection.

Properties

- becomes a highly flowable mortar after water is added and closes concrete voids non-positively and self-leveling.
- creates a high strength.
- is resistant against frost, de-icing salt, crude oil and sulphate, waterproof.
- is conform to fire resistance class A 1 (non-flammable) and therefore can be taken in a mortar-mix used for fire protection.
- has a low W/C-ratio.
- is suitable for indoor and outdoor use.

Grain sizes of the mortar

- Grain size 0 - 4 mm

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 Duo and Power Box system (Z-21.8-1867 and Z-21.8-1840).

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. Water consumption

max. 12 % water, i.e. approx. 3.0 litres water per 25 kg bag.

3. Mixing

The grouting mortar should be mixed in a compulsory mixer or with a slow moving stirrer in a mortar barrel. First, put 2/3 of the water amount into the mixer, then add the mortar and after a short mixing time fill in the remaining water.

Mixing time: approx. 4-6 minutes.

Processing time: 60 minutes at +20°C.

4. Instructions

- Bear in mind when grouting air must be able to leak. A careful vibration can avoid entrapped air.
- A grouting with mortar should not be done at temperatures below +5°C respectively above +30°C without additional measures.
- A maximum height of 3.75 m is allowed for one step of grouting. The further grouting is done in sections.

5. Post-treatment

It should be prevented that the grouting mortar runs dry too fast for at least three days after application. Appropriate measures are covering with plastic sheets, wet tissues or watering.

Consumption

25 kg dry mortar results in 13 litres grouting mortar.

Storage

Dry and direct sunlight has to be avoided. The mortar should be used within 12 months (date of manufacturer is given on the bag).

Packaging

25 kg paper/PE-bags with $42 \times 25 \text{ kg} = 1.050 \text{ kg}$ per euro-pallet

The mortar is certified, test certificates are available and can be delivered on request.

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Exposure classes acc. to DIN EN 206-1 / DIN 1045-2													
XO	XC	XD	XS	XF	①	XA	XM ②						
0	1	2	3	4	1	2	3	1	2	3	4	1	2
•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•

① = excluded from StafStB-Regulation

② = additional measures required (epoxy resin coating)

Class of shrinkage	Class of early strength	Class of compression strength	Slump-/flow diameter class
SKVM II	B	C ≥ 50/60	f3



Technical data

Compression strength	
Days	[N/mm ²]
1	45
7	70
28	85

Bending tensile strength	
Days	[N/mm ²]
1	7.0
7	8.0
28	11.0

Slump
> 55 cm after 5 min.

Flow diameter
> 48 cm after 5 min.

Swelling measure
Swelling measure ≥ 0.1 % after 24 hours

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



The PHILIPP - P&T Grouting mortar is supplied by:

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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 guide values and are determined at +20°C.

Notes:

