

# CN 85

*New formulation for indoor and outdoor use*

## Cement Binder for Fast-Setting Screeds and Drainage Mortars

**Rapid cement for producing fast-setting cement screeds and drainage mortars**

### CHARACTERISTICS

- ▶ for indoor and outdoor use
- ▶ walkable after 3 hours
- ▶ rapid hardening
- ▶ ready to receive coverings after 24 hours
- ▶ for producing drainable and dense base courses

### SCOPE OF USE

CN 85 is used for producing bonded screeds, screeds installed on a separation layer, heated screeds and floating screeds produced in compliance with DIN EN 13 813/ DIN 18 560 (in layers of 10 to 80 mm thickness). CN 85 can be used under a variety of different floor coverings such as tiles and parquet.

It is used for producing wearing screeds that are subsequently covered with a floor coating.

Suitable for installing discoloration-proof natural stone coverings when using the thick-bed method.

For producing drainable base courses under tiles and natural stones (bonded installation from 20 mm up, on a separation layer/insulation layer/drainage mat from 50 mm up).

### SUBSTRATE PREPARATION

For producing bonded screeds/drainage mortars, the concrete must have a rough, open-pored structure with a good "key" or grip. Mechanically remove any surface contamination, sintered layers etc. Slightly pre-wet the concrete surface. Then produce a bonding slurry made of CN 85, a suitable sand and CC 81 (synthetic resin additive). Mix CC 81 with water at a ratio of 1 : 2 to produce the slurry. After that, brush the slurry into the surface.

When installing screeds/drainage mortars on a separation layer or screeds on an insulation layer/ drainage mortars on drainage mats, make sure to allow for connection and movement joints according to DIN 18 560 / DIN 4725.

Also install edging strips (perimeter insulation strips) or special joint profiles.

#### Installation of drainage screeds:

Suitable substrates are sound concrete floors resp. cemen-



tious load distribution layers (screeds), e. g. terraces and balconies, in outdoor areas with a sufficient slope. When using drainage mats, it is possible to work with less than the required minimum slope of 2 %, depending on the drainage mat manufacturer's instructions.

When working on waterproofed impervious surfaces, make sure that any penetrating water is drained from the construction (drainage mats, sufficient slope of the waterproofing layer).

### APPLICATION

#### Fast-setting screed:

Mix CN 85 with an aggregate according to DIN 4226 (grain size 0–8 mm, with a continuous and optimized grading curve). Add clean water and mix with the help of a customary paddle mixer (mixing ratio: see "Technical Data"). Do not admix any additives or other binders.

Always apply bonded screeds wet in wet while the bonding slurry is still fresh. After start of setting, the cement must not be diluted with water or mixed with fresh material. Once the

applied screed has started to set, do not screed this area over with fresh material; the transitions between already set and fresh material must be separated by dummy joints. The screed must be applied, compacted, levelled and rubbed down within the working time. Heated screeds produced with CN 85 must be pre-heated according to the requirements of FBH-D3 (German Guideline "Coordination of interfaces with heated floor constructions"). Immediately after the "functional heating", tiles can be laid at a surface temperature of 18–25 °C.

#### Installation of discoloration-proof natural stones using the thick-bed method:

Produce CN 85 with a plastic consistency and apply it wet in wet as a mortar bed with a layer thickness of approx. 3–5 cm, depending on the thickness of the slabs. Skim off the mortar surface according to the usual method used on construction sites. Use a brush to coat the rear side of the slabs with a bonding slurry prepared from CN 85 and CC 81 (mixing ratio CC 81/water 1 : 2). Immediately lay or tap the slabs into place. Directly afterwards make an incision with the trowel into the mortar bed to fit the slab size.

#### Use of CN 85 as a drainage mortar binder:

CN 85 can be mixed with aggregates of grain size 2–5 mm, 5–8 mm and 8–12 mm and used as a water-permeable single-grain or drainage mortar.

Mix CN 85 with a mineral aggregate and clean water in a free-fall or paddle mixer until it has an earth-moist consistency. After approx. 24 hours, the surface is ready to be covered with top coverings like tiles and natural stones, using suitable tile adhesives and the thin- or medium-bed method (e. g. CERESIT CM 24, CM 90, CM 29).

## PLEASE NOTE

Use CN 85 only in dry conditions and at temperatures of +5 °C to +30 °C. Excess mortar can be cleaned off with water while still fresh, but after hardening only mechanical removal is possible. Rinse and clean the mixers and mortar pumps with water before and after work.

CN 85 contains cement and sets off an alkaline reaction with water. Therefore protect eyes and skin. If contact occurs, rinse thoroughly with plenty of water. In case of contact with the eyes, seek medical advice immediately. Please refer to the Safety Data Sheet for information on safety and disposal.

**Hazard notes/Safety advices/Dangerous goods classification/waste disposal advices:** See Material Safety Data Sheet.

## TECHNICAL DATA

Material base:	Cement combination with a high-quality synthetic resin powder (chromate-reduced) GISCODE ZP1
Bulk density:	approx. 1.2 kg/dm <sup>3</sup>
Working time:	approx. 40 minutes
Ready for foot traffic:	
Fast-setting screed:	after 3 hours
Drainage mortar:	after 24 hours
Coverings in a thick bed:	after 6 hours
Ready for covering:	
Tiles and other coverings:	after 24 hours
Parquet:	after 3 days
Residual moisture: (fast-setting screed)	after 24 hours ≤ 3 % CM (measured with the CM device)
Mixing ratio:	
Fast-setting screed/ thick-bed mortar:	CN 85 : sand (0–8) = 1 : 4 parts by weight
Drainage mortar:	CN 85 : mineral aggregate = 1 : 4 parts by volume
Required amounts:	
Fast-setting mortar/ thick-bed mortar:	approx. 3.7 kg/m <sup>2</sup> per cm layer thickness
Drainage mortar:	approx. 3.5–4 kg/m <sup>2</sup> per cm layer thickness
Water permeability: (pressure-free at a layer thickness of 3 cm)	500–1000 l/m <sup>2</sup> /h (depending on the grain size of the aggregate)
Shelf life:	approx. 6 months if stored in a tightly closed sack in a cool and dry place. Use up opened sacks as quickly as possible.

**Should you need support or advice, please consult our advisory service for architects and craftsmen.**  
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The above information, in particular recommendations for the handling and use of our products, is based on our professional knowledge and experience. As materials and conditions may vary with each intended application and thus are beyond our control, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for the intended application method and use. Legal liability cannot be accepted on the basis of the contents of this technical data sheet or any verbal advice given unless there is evidence of wilful intent or gross negligence on our part.  
 This technical data sheet supersedes all previous editions.

Apart from the information given in this technical data sheet, it is also important to observe the relevant guidelines and regulations of various organizations and trade associations as well as the applicable DIN standards.

All data given was obtained at an ambient and material temperature of +23°C and 50 % relative humidity unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

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<b>00335</b>	
<b>EN 13813: 2002 GT-C35-F7</b>	
<b>Cementitious screed material for use internally in buildings</b>	
Reaction to fire	<b>A1fl</b>
Release of corrosive substances	<b>CT</b>
Water permeability	<b>NPD</b>
Water vapour permeability	<b>NPD</b>
Compressive strength	<b>C35</b>
Flexural strength	<b>F7</b>
Wear resistance	<b>NPD</b>
Sound insulation	<b>NPD</b>
Sound absorption	<b>NPD</b>
Thermal resistance	<b>NPD</b>
Chemical resistance	<b>NPD</b>