

PRODUCT DATA SHEET

Virtually free
from all shrinkage
and deformation



Low-Shrink Rapid Cement

UZIN NC 198

Accelerated special cement for producing low-shrinkage, dimensionally stable screeds – for interior and exterior use

Description:

Accelerated, special cement-based binder for producing fast-drying rapid screeds. Due to its uniquely low shrinkage, the screed remains dimensionally stable with no dishing or sinking at edges, even in large areas. Crack inducing joints are often unnecessary. Compared with conventional screeds, the incidence of cracking is extremely low. Depending on the mix ratio and the quality of the screed sand added on site, it is possible to produce screeds in the strength categories CT-C25-F4, CT-C35-F5 or CT-C45-F6 in accordance with DIN EN 13 813. For interior and exterior use.

Suitable for:

- ▶ bonded screeds
- ▶ screeds on separating membranes
- ▶ screeds on insulation (floating screeds)
- ▶ heated screeds
- ▶ outdoor screeds for subsequent covering with tiles or natural stone
- ▶ mixing with regulation grade screed sands and water using normal mixing techniques by means of a screed pump on site
- ▶ normal wear use in domestic and commercial locations with all types of surface coverings
- ▶ as a UZIN system component in high-speed construction



- ▶ Free from deformation and low-stress
- ▶ Large areas without joints
- ▶ Very easy to work
- ▶ High strength
- ▶ Quick to heat up
- ▶ Rapid drying
- ▶ Waterproof
- ▶ For all types of screed construction
- ▶ Low chromate content

Product Properties / Benefits:

Hydraulic setting special binder that sets virtually shrink- and stress-free. Thanks to its smooth consistency, it is especially easy to work.

Can be mixed and pumped using normal screed techniques. Accelerated setting and drying, therefore quickly ready for covering and a problem-solver in construction work to tight deadlines.



Technical Data:

Packaging:	paper sack
Packsize:	25 kg
Shelf life:	min. 6 months
Mixing ratio binder / sand:	1 : 4, 1 : 5, 1 : 6 parts by weight
Required water quantity:	12 – 22 litres (according to sand moisture content)
Water / cement value:	max: 0.45
Colour:	grey
Consumption:	see "Applications Chart"
Working temperature:	+ 5 °C / 41 °F to 25 °C / 77 °F at floor level
Mixing time:	2 – 3 minutes
Working time:	60 – 90 minutes*
Set to foot traffic:	after approx. 12 hours*
Heat-drying:	3 days after installation
Ready for covering:	after approx. 24 hours*

* At 20 °C / 68 °F, 65 % relative humidity and normal screed thickness of 4.5 cm.
See also "Drying".

UZIN | A Brand of UFLOOR Systems

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Substrate Preparation:

Test the substrate in accordance with applicable standards and notices and report any deficiencies. As far as is possible, any subsequent deflection in the substrate must be excluded.

Refer to the Product Data Sheets for the products used.

Bonded Screed:

Depending on condition brush, abrade, grind or shot-blast the substrate, remove loose material and thoroughly vacuum the surface. Dampen the concrete several times 1 or 2 days in advance. As a bonding agent, make a slurry using 4 parts UZIN NC 198, a little sand and 1 part UZIN PE 360 or codex Fliesengrund. Adjust the consistency by adding water. Brush the slurry onto the damp substrate using a hard brush or broom. Apply the screed mortar immediately "wet in wet".

Screed on Separating Membrane or Insulation:

Incorporate the separating or insulating layer without folds and with adequate overlap at the joints. Use materials with adequate dynamic rigidity and that lie flat. Ensure that covering of pipe-work, as well as the provision of edging-strips, bay-joints and movement-joints are carried out professionally.

Example of screed thicknesses based on DIN 18 560 for cement screeds corresponding to CT-C35-F5 for vertical loading $\leq 2 \text{ kN/m}^2$ (Table 1):

Bonded screed:	min. 2.5 cm
Screed on separating membrane:	min. 3.5 cm
Screed on insulation:	min. 4.0 cm
Screed covering heating pipes:	min. 4.0 cm

Application:

- Mix UZIN NC 198 with washed screed sand 0/8 (A/B 8 in accordance with DIN 1045-2) and water using standard mixer- and delivery- equipment. Select a cement / sand mixing ratio according to the screed quality required, see "Applications Chart".
- The required water quantity depends on the sand moisture content. Mortar consistency should be between 'wet earth' and 'plastic' – on no account make the mix too wet or thin.
- Only mix as much mortar as can be applied within approx. 1 hour. At breaks in work, immediately empty and clean out the mixer, pump and hoses. Deliver, distribute, compact and smooth the screed very quickly. Take into account the rapid setting.
- Check the residual moisture using the CM-Test equipment and according to the current BEB instructions. Test duration 10 mins. for a 50 g net sample weight.

Applications Chart:

Mixing ratio for a 200 litre pump with 300 kg of screed sand:			
Strength	Ratio	Consumption / Mix	Consumption / m ²
CT-C25-F4	1 : 6	2 sacks (50 kg)	2.6 kg / m ² / cm thickness
CT-C35-F5	1 : 5	2.5 sacks (62.5 kg)	3.2 kg / m ² / cm thickness
CT-C45-F6	1 : 4	3 sacks (75 kg)	4.0 kg / m ² / cm thickness

Ready for covering:

	CM-Test 24 hrs. after installation	Later measurement after 24 hrs.	Drying in days*
Ceramic tiles (large & small format)	$\leq 3.5 \text{ CM-}\%$	$\leq 3.5 \text{ CM-}\%$	approx. 1
Textile covering	$\leq 3.0 \text{ CM-}\%$	$\leq 3.0 \text{ CM-}\%$	approx. 2
Resilient covering, e.g. PVC, linoleum, rubber, PU	$\leq 3.0 \text{ CM-}\%$	$\leq 2.5 \text{ CM-}\%$	approx. 5
Wood Flooring, Cork, Laminate	$\leq 2.0 \text{ CM-}\%$	> 7

For wood flooring, cork or laminate coverings, always wait until 2.0 CM-%
* At 20 °C / 68 °F, rel. humidity, forced ventilation and screed thickness of 40 – 55 mm on insulation or separating membrane.

Important Notes:

- ▶ Shelf life at least 6 months in original packaging when stored in dry conditions. Tightly reseal opened packaging and use the contents as quickly as possible.
- ▶ **Heat-drying:** when using as a heated screed, the heating programme can be started after 3 days. The flow-temperature of 25 °C / 77 °F should be maintained for 3 days, then the temperature is increased in steps of 10 °C / 50 °F / day up to the maximum flow-temperature (max. 55 °C / 131 °F). Maintain at the maximum temperature for at least 2 days then reduce in steps of 10 °C / 50 °F / day down to a flow-temperature of 25 °C / 77 °F. The first heating and cooling cycle must be carried out before the tope covering is installed. For this, the relevant protocol should be carried out by the heating system installer. A heating protocol for UZIN NC 198 can be supplied on request over the internet.
- ▶ In outdoor locations, prior to installation of tiling or natural stone, a waterproofing seal-coat of e.g. codex NC 210 or codex NC 220 should be applied.
- ▶ For surfaces exposed to constant freeze-thaw conditions, in exterior locations as well as for surfaces that will be used without a covering or protective coating, technical advice must be obtained.
- ▶ UZIN NC 198 is not suitable for use in under water locations.
- ▶ Optimum installation conditions are at 15 °C / 59 °F and relative humidity below 65 %. Low temperatures, high humidity and greater screed thickness will delay, whilst high temperatures will accelerate the setting, drying and readiness for covering. Protect freshly installed screeds from strong draughts, direct sunlight and sources of heat. Immediately that readiness for covering is reached, the covering should be installed so as to prevent new moisture ingress from high air humidity.
- ▶ To ensure high screed quality where there is uncertainty as to sand quality or moisture content, for the same amount of cement binder add a little less sand (approx. 4 shovels) and mixing water to the mixing container. Do not completely fill the mixer.
- ▶ **Quality factors:** drying and strength depend, amongst other things, on the water quantity used. With a lower water quantity, the screed mortar has a stiffer consistency but, with good compaction, a higher strength and faster drying. Too much water reduces the strength, delays drying, increases shrinkage and the risk of cracking.
- ▶ The following standards, regulations and publications are applicable and especially recommended:
 - DIN EN 13 813 "Screed mortars and screed compounds"
 - DIN 18 353 "Working with screeds"
 - DIN 18 195 "Structural damp-proofing"
 - DIN 18 560 "Screeds in the construction industry"
 - ZDB publication "Pipe-work, cables and cable ducting on new floor slabs"
 - "Commissioning of heated flooring constructions"

Protection of the Workplace and the Environment:

Irritant. Contains cement low in chromate acc. Directive 2003/53/EC. Cement produces strong alkaline on reaction with water. Avoid contact with skin and eyes. In the event of contact, rinse thoroughly and immediately with water. In the event of skin or eye irritation, consult a doctor. When mixing wear a protective dust-mask. Use protective gloves. Presents no physiological or ecological risk when fully cured. Meets EMICODE EC 1 requirements (less than 200 micro-grams per cubic metre of Volatile Organic Compound emission) for maximum user safety and promoting healthier Indoor Air.

Disposal:

Dispose of empty packaging according to local regulations. Collect waste material, mix with water and allow to harden- then dispose as Construction Waste.