



Low-shrinkage top-coat rapid cement

UZIN SC 989 Strong

Accelerated special cement for producing low-shrinkage, dimensionally stable top-coats for interior and exterior use

Areas of application:

Rapid cement for creating low-shrinkage top-coats (class SZ-T according to TKB Bulletin 14). Low-tension, and dimensionally stable, so deformation, cracks and shrinkage are avoided even when applied over large areas. Predetermined breaking points are often not necessary because the tendency of cracking is extremely low. Depending on the mixing ratio and quality of the screed sand, top-coats with strength classes between C40-F6 to CT-C50-F7 according to DIN EN 13 813 can be produced. For interior and exterior use.

Suitable for:

- ▶ Top-coats, on separating membranes and insulation (floating screeds)
- ▶ Increased requirements on strength
- ▶ Cementitious heated screeds
- ▶ Top-coats for interior and exterior use
- ▶ Heavy duty for use in commercial and industrial areas, e.g. factories
- ▶ Subsequent impregnation with UZIN SC 1800 Finish



Product benefits / properties:

Due to its low-shrinkage drying, UZIN SC 989 Strong is perfectly suitable for producing fault-free top-coats. It also has an very long working time allowing the installer to produce a top quality finish. UZIN SC 989 Strong is mixable and can be pumped with all common screed techniques.



Composition: Special cements, mineral aggregates, redispersible polymers and additives.

- ▶ Rapid cement class SZ-T (TKB-MB 14)
- ▶ Deformation-free and low-tension
- ▶ Very long working time
- ▶ Large areas without joints
- ▶ Heating after 3 days
- ▶ Very high strength
- ▶ Waterproof
- ▶ Low chromate content acc. Regulation (EC) No. 1907/2006 (REACH)
- ▶ EMICODE EC 1 R PLUS/very low-emission

Technical data:

Packaging:	Paper bag	
Packsize:	25 kg	
Shelf life:	min. 6 months	
Mixing ratio binding agent / sand:	1 : 4 parts by weight	1 : 3 parts by weight
Required water quantity**:	max. 30 litres	max. 40 litres
Water / cement value:	max. 0.45	max. 0.4
Colour:	grey	
Consumption:	See "Application table"	
Working temperature:	+5 °C to 25 °C at floor level	
Mixing time:	2 – 3 minutes	
Working time:	3 – 4 hours*	
Ready for foot traffic:	after 24 hours*	
Ready for covering:	after 3 days for all coverings*	

* At >10 °C and max. 80% relative humidity.

** per 200 l mix, depending on moisture of sand.

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Subfloor preparation:

Test the substrate in accordance with applicable standards and bulletins and report any deficiencies. Possible deformations in the substrate must be rectified as much as possible.

Refer to the product data sheets for other products used.

Bonded screeds:

Depending on condition, brush, abrade, grind or shot-blast the substrate, remove loose material and thoroughly vacuum the surface. Apply an even coat of UZIN PE 360 Plus primer. As a bonding agent, prepare a slurry using 4 parts UZIN SC 989 Strong, a small amount of screed sand and 1 part water. Adjust consistency by adding more water. Brush the slurry onto the properly primed concrete using a hard broom. Apply the screed mortar immediately "wet in wet".

Screed on separating membranes or insulation layers:

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

Example for screed thicknesses based on DIN 18 560 for cementitious screed corresponding to CT-C40-F6 (mixing ratio 1 : 4) for vertical loads up to 3 kN/m²:

Bonded screeds:	min. 2.5 cm
Screed on separating membrane:	min. 3.5 cm
Screed on insulation:	min. 5.5 cm
Screed covering heating pipes:	min. 5.5 cm

Processing:

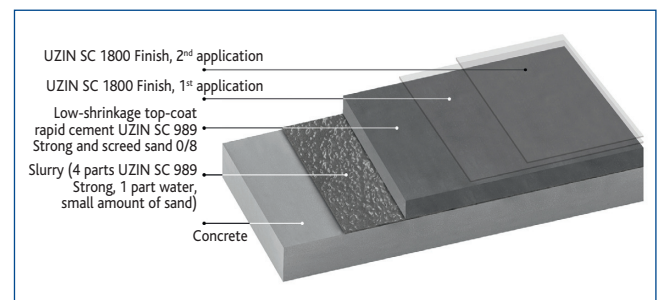
1. Mix UZIN SC 989 Strong with washed screed sand 0/8 mm (A/B 8 in accordance with DIN 1045-2) and water using screed pump or forced-action mixer. Choose cement/sand mixing ratio according to quality required, see "Application table".
2. The required amount of water (note w/z value of max. 0.45, see Technical Data) depends on the sand moisture content. Mortar consistency should be between 'wet earth' and 'plastic', make sure not to mix too thin.
3. During work breaks, empty and clean out mixer, pump and hoses immediately. Deliver, distribute, compress and smooth the screed.
4. Check the residual moisture using the CM tester according to the current TKB Bulletin 16. Test duration 10 min., 50 g net sample weight.

Application table:

Mixing ratio for 200 l pump with approx. 300 kg screed sand:			
Strength	Mixing ratio	Consumption / mix	Consumption / m ²
3 day values			
CT-C35-F4	1 : 4	3 bags (75 kg)	4.0 kg/m ² /cm thickness
CT-C40-F5	1 : 3	4 bags (100 kg)	5.0 kg/m ² /cm thickness
28 day values			
CT-C40-F6	1 : 4	3 bags (75 kg)	4.0 kg/m ² /cm thickness
CT-C50-F7	1 : 3	4 bags (100 kg)	5.0 kg/m ² /cm thickness

Application example:

Surface treatment with UZIN SC 1800 Finish silicate sealer is possible on UZIN SC 989 Strong with a max. residual moisture of 2.0 CM % with mixing ratio 1 : 3 or 1 : 4.



Important notes:

- ▶ Shelf life at least 6 months in original packaging when stored in dry conditions. Tightly re-seal opened packaging and use the contents as quickly as possible.
- ▶ The technical properties of the screed produced at the building site must be tested during an initial check and monitored at regular intervals. This must be done by the screed installer. Initial testing must be performed again as soon as the starting materials change.
- ▶ With careful production and having regard to the manufacturer specifications a surface tensile strength of at least 1.5 N/mm² according to BEB Bulletin 9.1 can be achieved.
- ▶ For bonded top-coats with mechanical stress shall apply the stress groups II and III according to DIN 18 560-7, table 1.
- ▶ Seal in outdoor locations, e.g. with codex NC 210 or codex AX 220, must be applied prior to the installation of tiles or natural stone.
- ▶ For surfaces exposed to constant freeze-thaw conditions that will be used without protective coating, technical advice should be obtained.
- ▶ Low temperatures, high humidity and greater thickness will delay whilst high temperatures and low humidity will accelerate setting, drying and readiness for covering.
- ▶ The temperature of room, substrate and additive must not fall below + 5 °C and not exceed + 25 °C.
- ▶ Install screeds only in dry and closed rooms as well as protected against draughts.
- ▶ To ensure a better screed quality – if uncertain about the sand quality or moisture content – add a little less sand (approx. 4 shovels) and less mixing water to the mixing container for the same amount of binder. Do not completely fill the mixer.
- ▶ The screed needs to be smoothed with a machine to achieve high surface strength.
- ▶ To achieve high strength and optimum homogeneity, the use of a secondary mixer is recommended. From a screed thickness of 8 cm, the use of an after-mixer is absolutely necessary.
- ▶ Quality factors: Readiness for covering and strength depend, amongst others, on the amount of water used. With a lower water quantity, the screed mortar has a stiffer consistency but with good compaction a higher strength and quicker readiness for covering. Too much water reduces the strength, delays drying, increases shrinkage and the risk of crack formation.
- ▶ Follow the generally acknowledged rules of the trade and technology for screed installation of the respective applicable standards (e.g. EN, DIN, VOB, OE-Standard, SIA, etc.). The following standards and bulletins represent supporting information and are recommended for special attention:
 - DIN EN 13 813 "Screeds material and floor screeds"
 - DIN 18 353 "Working with screeds"
 - DIN 18 195 "Waterproofing of buildings – Vocabulary"
 - DIN 18 534 "Waterproofing for indoor applications"
 - DIN 18 560 "Screeds in the building industry"
 - BEB Bulletin 9.1 "Surface tensile strength and pull-off strength of floors"
 - "Interface coordination with heated floor constructions"

Protection of the Workplace and the Environment:

Contains cement low in chromate acc. Regulation (EC) No 1907/2006 (REACH). Cement produces strong alkaline on reaction with water. Avoid contact with skin and eyes. In the event of contact, rinse immediately with water. In the event of skin or eye irritation, seek medical advice. When mixing wear a protective dust-mask. Use protective gloves. Presents no physiological or ecological risk when fully cured.

Basic prerequisites for best possible indoor air quality following floor covering work are conformity to standards of the working conditions, as well as thoroughly dry substrate, primer and smoothing compound.

EMICODE EC 1 R PLUS – very low emission.

Disposal:

Where possible, collect product residues and re-use. Do not allow to get into drains, sewers or ground. Empty paper packaging is recyclable. Collect waste product, mix with water, allow to harden, then dispose as Construction Waste.