PRODUCT DATA SHEET

Practically no shrinkage and deformation, optimised consumption

Low-Shrink Rapid Cement

UZIN SC 970 Thermo

Rapid cement for producing low-shrinkage, dimensionally stable screeds for interior use which require early heating

Areas of application:

Calcium aluminate cement, category SZ-T according to TKB-Technical Briefing Note 14 for the production of rapid cement which are low stress and virtually free from shrinkage. Even large areas can be made dimensionally stable, without deformation or edge sinkage.
Predetermined breaking points are often not necessary because the tendency of cracking is extremely low.
For the preparation of cementitious screeds of strength class CT–C30–F5 according to DIN EN 13 813. For interior applications.

Suitable for:

- Bonded screeds
- Screeds on separating membrane
- Screeds on insulation (floating screeds)
- Heavy duty domestic and commercial areas with all types of surface covering
- Heated screeds
- As UZIN system component in rapid construction

Product benefits / features:

UZIN SC 970 Thermo can be mixed and pumped using normal screed techniques and is especially easy to work with thanks to its smooth consistency. UZIN SC 970 Thermo is the problem solver in construction work with tight deadlines. Heating can be started after 3 days and floor coverings can be installed after 10 to 14 days.

GEV-EMICODE EC 1 PLUS very low emission

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

- Rapid cement class SZ-T (TKB-Technical Briefing Note 14)
- Deformation-free and low-stress
- Joint free large areas up to 200 m²
- Heating after 3 days
- Very easy to install
- Exceptional properties, even with unfavourable climate conditions
- Waterproof
- Low chromate content
- EMICODE EC 1 R PLUS / very low-emission

Technical specifications:

Packaging:	paper sack
Packsize:	25 kg
Shelf life:	min. 6 months
Mixing ratio:	1 : 6 weight parts (binding agent : sand)
Strenght class:	CT-C30-F5 (28 days) CT-C25-F4 (3 days)
Amount of water required per 200 l mixture:	13 – 15 litres (according to sand moisture content)
Water / cement value:	0.5 – 0.6
Colour:	grey
Consumption:	2.6 kg per m² and per cm of thickness
Working temperature:	+5 °C to 25 °C at floor level
Mixing time:	2 – 3 minutes
Working time:	90 – 120 minutes*
Set to foot traffic:	after 16 hours*
Heat drying:	3 days after installation*
Ready for covering:	after 10 – 14 days*

* At >10 °C and max. 80 % relative humidity. Depending on screen line and w/z-value.

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UZIN SC 970 Thermo

Substrate preparation:

Test the substrate in accordance with applicable standards or notices and report any deficiencies. Any possible deformation of the substrate must be prevented.

Refer to the product data sheets for other 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. As a bonding agent, make a slurry using 4 parts UZIN SC 970 Thermo, a small amount of screed sand and 1 part water. Adjust consistency by adding water.
Brush the slurry onto the pale damp or properly primed concrete using a hard broom. Apply the screed mortar immediately "wet in wet".

Screed on separating membranes or insulation:
Incorporate membranes or insulation without folding and adequately overlap at the joints. Install insulation or membranes that have sufficient dynamic rigidity and lie flat. Make proper provision for pipe-coverings as well as edging-strips, bay-joints and movement joints.

Example for screed thicknesses according to DIN 18 560 for cementitious screeds according to CT-C30-F5 for vertical loads ≤ 2 kN/m²:

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:

1. Mix UZIN SC 970 Thermo 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 at a ratio of 1 : 6, cement to sand.
2. The required amount of water (note w/z value of max. 0.6) depends on the sand moisture content. The mortar consistency should be from 'wet earth' to 'soft plastic', never too thin.
3. Mix only as much mortar as can be applied within approx. 1 hour. During work breaks, empty and clean the mixer, pump and hoses immediately.
   Deliver, distribute, compact and smooth the screed very quickly. Take into account the screed is rapid setting.
4. Check the residual moisture using the CM test equipment according to current BEB bulletin. Test duration 10 min., 50 g net sample weight.

Readiness for covering:

Floor covering	Ready for covering value[1)]	Experiential values of readiness for covering in days[2)]
Ceramic tiles, slabs	≤ 2.5 CM-%	7 – 10
Textile and resilient flooring as well as wood flooring	≤ 2.0 CM-%	10 – 14

[1)] At >10 °C and max. 80 % rel. humidity, forced ventilation and a screed thickness of 40 – 55 mm insulation or separating layer.
[2)] Our experience of many years has shown that the "Days to readiness for covering" are reached at common construction site conditions.

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.
- Heat drying: Observe separate heating protocol when used as heated screed. It is available in the internet at www.uzin.com or www.codex-x.com.
- UZIN SC 970 Thermo is not suitable for use in under-water locations.
- Low temperatures, high humidity and greater thickness will delay drying, whilst high temperatures 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.
- 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 cracking.
- Do not mix with other rapid cements, screed binding agents or screed additives.
- Follow the generally acknowledged rules of the trade and of technology for screed installation of the respective applicable standards (e.g. EN, DIN, VOB, Ö-Norm, SIA, etc.). The following standards and bulletins, amongst others, represent supporting information and are recommended for special attention.
  – TKB-Technical Briefing Note 14 "rapid cement screeds"
  – 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"
  – ZDB bulletin "Pipes, cables and cable ducts on bare floors / ceilings"
  – "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 dispersal into drains, sewers or ground. Empty paper packaging is recyclable. Collect waste material, mix with water and allow to harden, then dispose as Construction Waste.