Technical data sheet

Rapid construction and renovation system

# UZIN TURBOLIGHT®-SYSTEM

Subfloor construction-system to create subfloors prior to the installation for all types of floor coverings

## PROBLEM SOLVER AS SYSTEM CONFIGURATION:

- For limited load-bearing capacity (statics) as light screed construction
- For limited build-up height as thick layer levelling compound construction
- For sagging ceilings as supporting compensating construction
- For rapid screed construction when facing tight deadlines
- For legal requirements relating to constructions with non-flammable building materials (building material class A1 / A2) as screed construction

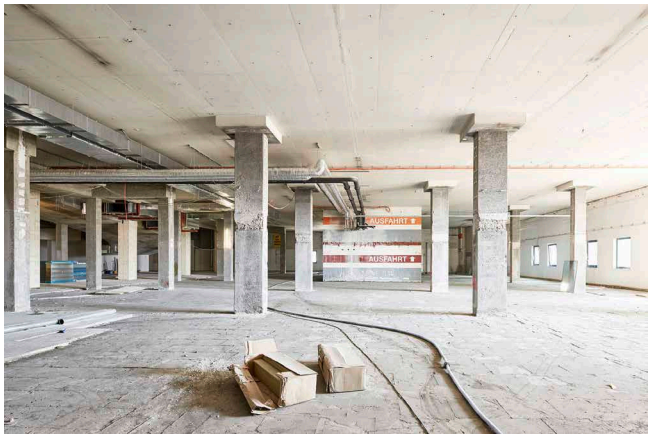
## APPLICATION:

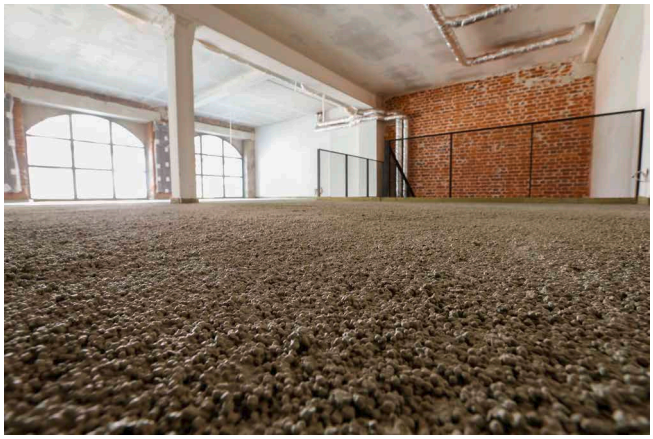
- On wooden beam ceilings and floorboards
- On concrete subfloors
- For demands of home, office and assembly area use (see “Load recommendations” table)
- Bonded and on separating layer
- For all types of floor covering (except wood blocks)
- For all types of ceramic tiles and natural stone – also for large dimensions
- Beneath hot water and electrical underfloor heating
- Embedding thin-layer hot water underfloor heating systems
- Embedding of underfloor temperature control systems with electrical heating conductors
- In wet rooms*

## PROPERTIES

- System composition from the bare floor to the floor covering
- Rapid construction system, flooring must be installed soon after
- Low weight per area
- Load recommendation up to 4 kN point load and 5 kN/m² distributed load
- Good sound absorption according to DIN EN ISO 140-8
- Good heat insulation properties
- F 60 (highly flame-retardant); No. P-SAC02/III-1207
- Not combustible
- Max. area of application 100 m²
  Max. side length / bonded: 15 m*
  Max. side length on separating layer: 10 m*
- For internal and external use

*See “Important notes”.



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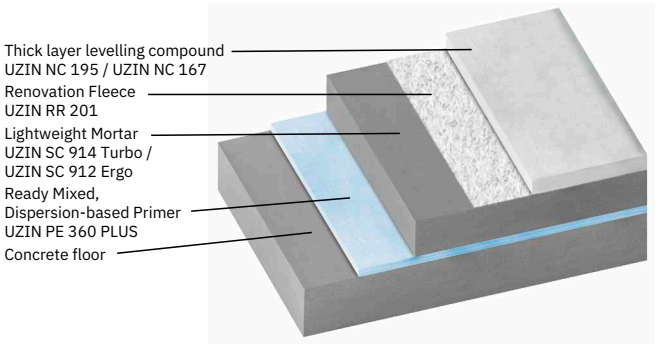
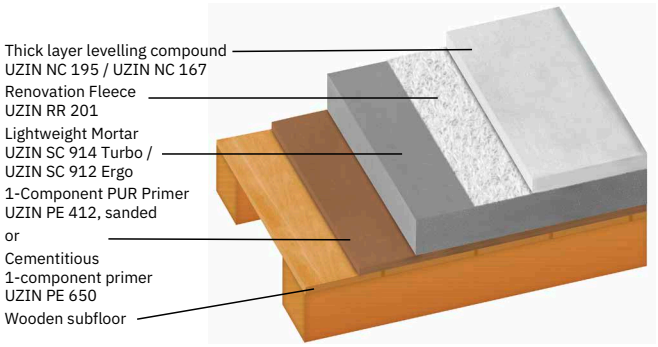
# UZIN TURBOLIGHT®-SYSTEM

## UZIN TURBOLIGHT®-SYSTEM ON CONCRETE SUBFLOORS:




## UZIN TURBOLIGHT®-SYSTEM ON WOODEN SUBFLOORS:




## UZIN TURBOLIGHT®-SYSTEM – TECHNICAL DATA OF THE SYSTEM COMPONENTS

| | **UZIN SC 914 Turbo / UZIN SC 910 + specified Styrofoam granulate** | **UZIN SC 912 Ergo[1)]** | **UZIN NC 195** | **UZIN NC 167** | **UZIN RR 201** |
|---|---|---|---|---|---|
| Min. thickness, bonded | 20 mm | 6 mm | – | – | – |
| Min. thickness, floating | 30 mm | – | – | – | – |
| Max. thickness | 300 mm | 100 mm | – | – | – |
| Specific density (cured) | 0.35 kg/l | 0.32 kg/l | 1.9 kg/l | 1.9 kg/l | – |
| Consumption (dry mortar) | 2.6 kg/m²/cm | 2.6 kg/m²/cm | 1.7 kg/m²/mm | 1.7 kg/m²/mm | – |
| Consumption (in system) | 2.6 kg/m²/cm | 2.6 kg/m²/cm | 20 - 25 kg/m² | 20 – 25 kg/m² | per m² |
| Thermal coefficient | 0.12 W/mK | 0.097 W/mK | 1,1 W/mK | 1,4 W/mK | – |
| Flammability class (DIN 4102) | A2-s1, d0[2)] | A2-s1, d0 | $A1_{fl}$ | $A1_{fl}$ | A2 |
| Required water quantity | approx. 11 l/bag[2)] | approx. 8 l/ bag | approx. 5 l/ bag | approx. 3.6 l/ bag | – |
| Working time | approx. 30 min.* | approx. 30 min.* | 20 – 30 min.* | 20 – 40 min.* | – |
| Set to foot traffic after | 10 – 12 h* | 10 – 12 h* | 2 – 3 h* | 2 – 4 h* | Immediately |
| Pack size | 80 l/ 21 kg bag | 80 l/ 21 kg bag | 25 kg bag | 20 kg bag | 1.00 x 60 m |

* At 20 °C and 65 % relative humidity.
[1)] can only be used in bonded
[2)] please observe separate product data sheet of UZIN SC 910.

## UZIN TURBOLIGHT®-SYSTEM – RECOMMENDED MAX. LOADS

| **Covering** | **Quantity UZIN NC 195 or UZIN NC 167** | **Max. distributed load[1)]** | **Max. point load[2)]** | **Category (DIN EN 1991)** |
|---|---|---|---|---|
| Textile/resilient flooring and wood flooring | 20 kg/m² | 4 kN/m² | 3 kN | A, B1, B2 |
| Textile/resilient flooring and wood flooring | 25 kg/m² | 5 kN/m² | 4 kN | A, B, C1, C2, C3, C5 |
| Natural stone less than 10 mm thick, ceramic tiles with edge length up to 10 cm | 20 kg/m² | 3 kN/m² | 2 kN | A, B1 |
| Natural stone (min. 10 mm thick) and ceramic tiles with edge length longer than 10 cm | 20 kg/m² | 4 kN/m² | 3 kN | A, B1, B2 |
| Natural stone (min. 10 mm thick) and ceramic tiles with edge length longer than 10 cm | 25 kg/m² | 5 kN/m² | 4 kN | A, B, C1, C2, C3, C5 |

Obtain technical application advice for higher load requirements.
[1)] 3 days after installation of the thick layer levelling compound max. 2 kN / m².
[2)] 7 days after installation of the thick layer levelling compound, 3 days after installation of the thick layer levelling compound max. 2 kN.

# UZIN TURBOLIGHT®-SYSTEM

## UZIN TURBOLIGHT®-SYSTEM – AREA WEIGHT & THICKNESSES

| Installation height total | Installation height[1), 2)] UZIN SC 914 Turbo / UZIN SC 910 + Styrofoam granulate | Quantity used[3)] UZIN NC 195 / UZIN NC 167 | Area weight total |
|---|---|---|---|
| approx. 4 cm | 3 cm | 20 kg/m² | approx. 33.5 kg/m² |
| approx. 4.5 cm | 3 cm | 25 kg/m² | approx. 39.5 kg/m² |
| approx. 6 cm | 5 cm | 20 kg/m² | approx. 40.5 kg/m² |
| approx. 6.5 cm | 5 cm | 25 kg/m² | approx. 46.5 kg/m² |

[1)] The area weight increases by 3.5 kg/m² for each additional centimetre of installation height
[2)] Installation heights and area weights apply also to UZIN SC 912 Ergo as long as the max. installation height of 100 mm is not exceeded.
[3)] 20 kg UZIN NC 195 / UZIN NC 167 >> 23 kg/m² cured thick layer levelling compound.
25 kg UZIN NC 195/ UZIN NC 167 >> 29 kg/m² cured thick layer levelling compound.

## UZIN TURBOLIGHT®-SYSTEM – TECHNICAL DATA

| Properties | Value | Proof |
|---|---|---|
| Sound absorption according to DIN EN ISO 140-8 | 10 dB (5 cm build-up height) | Test report MFPA Leipzig |
| Sound absorption according to DIN EN ISO 16 251-1 | 17 dB (52 mm build-up height, in combination with UZIN Multimoll Softsonic[1)]) | Test report Uzin Utz |
| Sound absorption according to DIN EN ISO 16 251-1 | 18 dB (52 mm build-up height, in combination with UZIN RR 620[1)]) | Test report Uzin Utz |
| Sound absorption according to DIN EN ISO 16 251-1 | 20 dB (55 mm build-up height, in combination with UZIN RR 189[1)]) | Test report Uzin Utz |
| Fire resistance class | F 60 (5 cm build-up height) | General test certificate by building authorities (No. P-SAC02/III-1207) |
| Surface tensile strength | min. 1 N/mm² | Test certificate Uzin Utz |

[1)] Installation: Underlay on concrete ceiling, with UZIN Turbolight®-System installation above.

## READINESS FOR COVERING* OF THE LIGHTWEIGHT MORTAR FOR UZIN NC 195 AND UZIN NC 167

| | |
|---|---|
| Thickness UZIN SC 914 Turbo / UZIN SC 910 + Styrofoam granulate: up to 30 cm | Time till ready for covering[1)]: 2 days |
| Thickness UZIN SC 912 Ergo: up to 10 cm | Time till ready for covering[1)]: 2 days |

* At 20 °C and 65 % relative humidity.
[1)] Flooring should be installed within 1 – 2 days after readiness for covering of the lightweight mortar.

## READINESS FOR COVERING* OF UZIN NC 195 AND UZIN NC 167

| Application amount UZIN NC 195 / UZIN NC 167 | Covering type | Time till ready for covering |
|---|---|---|
| 20 kg/m² | Textile/resilient coverings | 5 days[2)] |
| 25 kg/m² | Textile/resilient coverings | 6 days[2)] |
| 20 or 25 kg/m² + UZIN PE 414 BiTurbo[1)] | Wood flooring | 2 days |
| 20 kg/m² | Ceramic tiles[3)] | 1 day |
| 25 kg/m² | Ceramic tiles[3)] | 2 days |

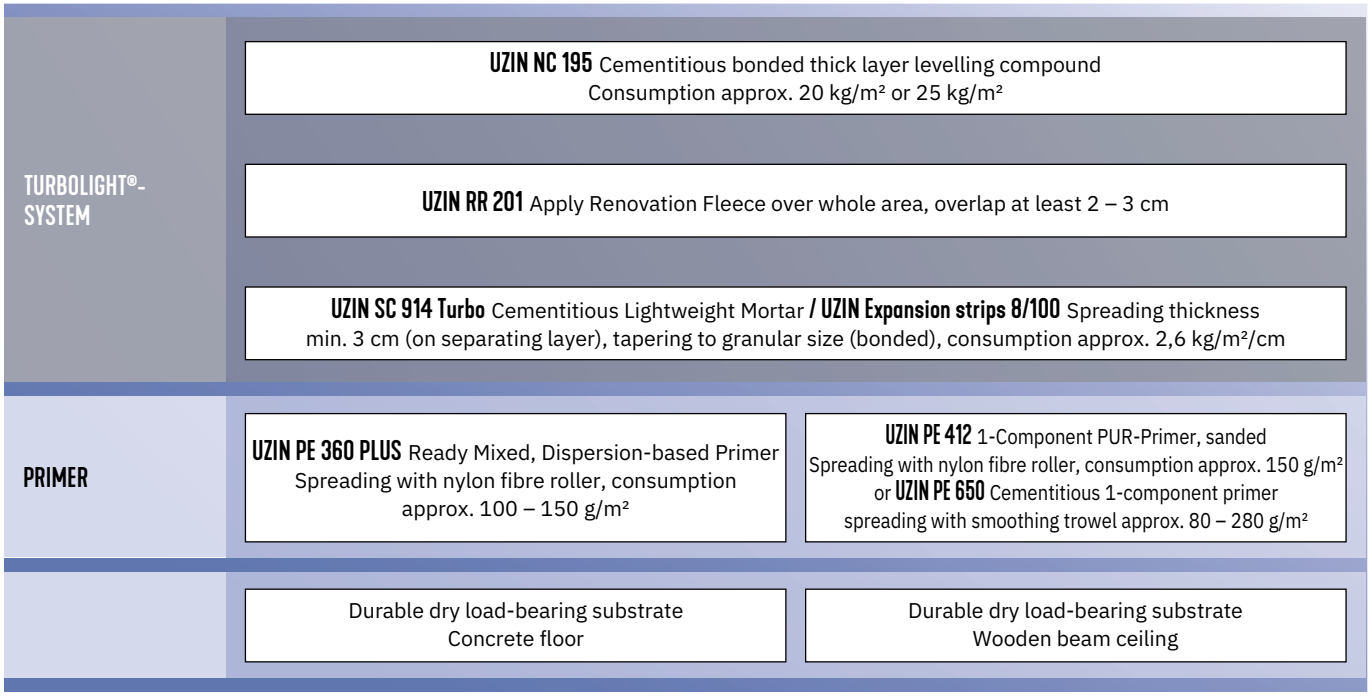
* At 20 °C and 65 % relative humidity.
[1)] Priming with UZIN PE 414 BiTurbo two days after installation of thick layer levelling compound.
[2)] Covering should be installed soon after. If flooring will be installed more than 7 days after the installation of UZIN NC 195 and UZIN NC 167, prime the above with one coat of UZIN PE 400 (1:1 diluted with water) or UZIN PE 414 BiTurbo 2 days after installation. A relative humidity of at least 50 % and max. 75 % must be maintained during the lying period.
[3)] For coverings sensitive to discolouration, such as natural stone, 1 extra day should generally be allowed for until readiness for covering.

# UZIN TURBOLIGHT®-SYSTEM

## IMPORTANT NOTES:

- Obtain technical application advice for exterior use and application in wet rooms.
- Obtain technical application advice when covering with natural stone.
- Use only bright floor covering for exterior ceramic tiles.
- Requirements on sound insulation are only met when the minimum thicknesses are complied with. A deduction of 2 dB from the test value must be taken into account when calculating the sound insulation according to DIN 4109.
- Due to the low thermal conductivity of UZIN SC 914 Turbo, special attention must be paid to high temperature differences, e.g. due to extreme exposure to light in conservatories.
- If there is uncertainty about the readiness for covering of UZIN SC 914 Turbo, UZIN SC 912 Ergo or UZIN SC 910 in unfavourable climatic conditions, its moisture content can be determined by measuring the KRL in accordance with TKB data sheet 18 'KRL method'. Readiness for covering reached at: 80 % RH. When determining the readiness for covering by CM measurement, proceed in accordance with the BEB leaflet 'CM measurement work instructions' with the following adjustments: Weight: 10 g
  Readiness for covering reached at: 10 CM-%.
- The materials used in the UZIN Turbolight®-System may exhibit hairline fissuring. Because of the long-fibre reinforcement they do not affect the functional capability of the overall system.
- Only static loads are to be considered for the loads released here. Dynamic loads must be considered separately.
- The individual product data sheets for the products used can be found on the www.uzin.com website.
- UZIN SC 910 (2 bags per 200 l Styrofoam granulate) is technically equivalent to lightweight mortar UZIN SC 914 Turbo.
- Hollow sound can also occur in bonded constructions. This is system-specific for the UZIN Turbolight®-System and does not indicate a defect.
- Before installing the UZIN Turbolight®-System, all finishing work should be completed, otherwise special protective measures are required.
- Joint formation: Field boundary joints can be made by cutting into UZIN NC 167 or UZIN NC 195 after ready for foot traffic, at the latest after 48 hours. Without thermal stress, these joints can be closed with force fit before the floor covering is installed. In case of thermal loads, application consulting should be obtained.
- If textile and resilient floor coverings are used, levelling may be necessary.
- Fastenings for installations on the UZIN Turbolight®-System must be carried out directly on the load-bearing ceiling. In the case of bonded constructions, installation can be carried out using the UZIN Turbolight®-System. In the case of constructions on a separating layer, installation must be carried out directly on the load-bearing substrate after removal of the affected floor section, observing suitable sound insulation measures.

## SAMPLE SYSTEM BUILD-UP FOR DIFFERENT FLOOR COVERINGS / WOOD FLOORING

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