



CONTOPP®

ULTIMATE 4

Article n°: 20.290

Technical
 datasheet

PROPERTIES

Function

- Quick to dry semi-dry sand/cement screeds within 4 days
- Increase in strength through synthetic hardening
- Load-dependent reduction of the screed thickness down to 30mm
- Contains tracer for a subsequent half-quantitative analysis in sand/cement screeds
- Rehydration protection

Application area

- For producing bonded screeds and floating screeds
- For producing of non-standard thin-layered screeds
- For producing screeds on underfloor heating
- For damp or outside areas
- EMICODE EC1plus



Data

Colour:	Green
Colour tracer-pigment:	Blue/yellow
Form:	liquid
Density (at 20°C):	1.06 ± 0.02g/ml
Processing temperature:	above + 5°C
Shelf life	ca. 12 months – protect from frost and direct sunlight
Supply form:	PE-HD-can: 20kg netto Container: 1,000kg netto

TECHNICAL DATA

Mix	1 : 5 mix by weight	Standard	CONTOPP®	Unit
Cement		63	63	kg
Sand 0/8 ¹⁾		310	310	kg
ULTIMATE 4		-	0.5 ²⁾	ltr.
w/c-ratio		0.70 - 0.80	0.48 – 0.50	

Strength	Criteria	Standard	CONTOPP®	Unit
	Flexural strength (28 days)	F5	F7	N/mm ²
	Comp. strength (28 days)	C25	C40	N/mm ²
	BRE test (impact resistance)	Category B	Category A	

Floor Finish	Criteria	Standard	CONTOPP®	Unit
¹⁾ according to EN 13139	Foot traffic	72	24	hours
²⁾ corresponds to 0.8 V-% of the cement weight	Receive final floor finish	≥ 28	4	days

This ideal screed mortar can only be manufactured whilst adhering to the processing information listed below. The details refer to 40 – 50mm screed thickness without UFH and 65 – 70mm screed thickness with UFH, normal climatic conditions at + 20°C and a relative humidity of 65%. Using sand with maximum grainsize < 8mm strength can be lower.

Basic materials

- CEM I or CEM II following EN 197
- Aggregates following EN 13139

PROCESSING INFORMATION

Recipe

- **Stir the CONTOPP® ULTIMATE 4 before use and regularly during use in order to prevent segregation!**
- Stick to the dosage (0.8 V-% of cement weight); ingredients should be added to the moistened mix. W/c-ratio < 0.50
- Mix for at least 2 minutes after adding all the components



Construction site conditions

- Protect screed from draughts and direct sunlight during setting.
- Remove surplus moisture by means of draught-free ventilation (natural ventilation).
- Nature of construction and site preparation following general codes of practice.

Minimum screed thickness ¹⁾

Flexural strength	Bonded	Unbonded	Floating	on underfloor heating ^{2) 3)}
7 N/mm ²	Standard: 20mm Heavy duty: 20mm	Standard: 35mm Heavy duty: 35mm	Standard: 35mm Heavy duty: 40mm	Standard: 35mm Heavy duty: 40mm

¹⁾ Working load: Standard ≤ 2.0kN/m²; Heavy duty: ≤ 3.5kN/m²

²⁾ In the case of screeds on underfloor heating thickness above the pipes

³⁾ No steel reinforcement required

SPECIAL INFORMATION

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Drying time ¹⁾

Screed thickness	20mm	30mm	40mm	50mm	60mm	70mm
≤ 3.0 CM-% residual humidity ²⁾	36 hours	48 hours	3 days	4 days	6 days	8 days

¹⁾ Normal climatic conditions at + 20°C and a relative humidity of 65% without UFH

²⁾ The residual moisture content must be tested prior to the application of the final floor finish (CM-method).

Screed on underfloor heating - start-up heating protocol ^{1) 2)}

Heating process ³⁾	24 hours after laying	48 hours after laying	72 hours after laying	96 hours after laying
Temperature	35°C	55°C	45°C	25°C

¹⁾ It can be useful to lengthen the heating procedure for screed thicknesses of > 50 mm above the pipes to achieve sufficient drying.

²⁾ During the heating phase do not carry out any finishing work and do not cover or block the screed surface.

³⁾ UFH must be switched off during the laying of the screed.

Measuring residual moisture content

- Prior to laying the top flooring, the residual moisture of the screed must be measured by the person laying the floor.
- According to the KNOPP's manufacturers advice all floor coverings must be laid under a residual moisture content of 3.0 CM-% using the carbide bomb measuring device (corresponds to approx. 4.5 Tramex reading – to be used only as indicator test).

Health & Safety

- Always observe general work hygiene when using our products.
- CONTOPP® ULTIMATE 4 is solvent-free and chloride-free.
- Our products do not deteriorate when stored properly. Therefore, the stability and reactivity are not affected by storage.
- Find out more information on handling CONTOPP® ULTIMATE 4 from our safety data sheets.

GENERAL INFORMATION

Standards and testing regulations

- EN 13139: Aggregates for mortar
- EN 197: Cement – Part 1: Composition, specifications and conformity for cements

Comments

The raw materials we process and the products we produce are subject to strict factory inspections. Do not use products from other manufacturers when using this product. It is stressed that our products and the procedure must be tested for suitability for the expected construction site conditions. The quality of screeds is essentially influenced by the quality of sand and cement, the mixing rates and the processing in accordance with approved screeding technology. Upon the publication all other previous copies shall become invalid.

Stand 05.08.2024