Technical Data Sheet

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FLOWPLUS®

Flowplus FRA

Article Number: 04.600

CHARACTERISTIC

Function

- Single-component universal additive for producing cementitious self-leveling screed
- Reduced shrinkage
- Strong and longlasting liquefaction capacity up to 120 minutes

Field of application

- Production of high-quality cementitious self-leveling screed in concrete batching plant
- Production of high-quality cementitious self-leveling screed in mobile mixing stations

TECHNICAL DATA

Key data

Color:	yellow
Form:	liquid
pH – value:	8,0 ± 1,0
Density (at 20 °C):	0,97 ± 0,02 g/cm^3
Chlorine content:	≤ 0,10 M-%
Alkali content:	≤ 8,5 M-% (as Na_2O-equivalent)
Valid solids content:	81 M-% (calculated)
Processing temperature:	above + 5 °C
Shelf life:	12 months – store protected from the sun and frost
Form of delivery:	18 kg PE-HD can net 210 kg poly-drum net 960 kg Container net

Mixing model

Mix design per m^3		Unit
Cement[1)]	350	kgs
Filler (e.g. limestone)	200	kgs
Aggregates 0/8[2)]	1400	kgs
CONTOPP® Flowplus FRA	8 - 14[3)]	kgs
w/c-ratio	ca. 0.80	
Flow table test[4)]	ca. 240	mm

Strength Parameter (after 28 days)

		Unit
Flexural bending strength	F4	N/mm^2
Compressive strength	C20	N/mm^2
Pull-up strength	ca. 1.0	N/mm^2
Degree of shrinkage	ca. 300 – 500	µm/m

1) following BS EN 197-1
2) following BS EN 13139
3) corresponds to 2.5 – 4.0 M-% of the cement weight
4) following Hägermann 5 min after start of mixing.
5) This self-leveling screed mortar describes an average formulation on the basis of numerous original lab inspections. On demand the customer-specific decisive guide formulation is carried out as an additional service before the initial utilization of CONTOPP® Flowplus IL by suitability testing in the KNOPP material laboratory under inclusion of all the raw materials to be used. The official initial type testing has to be carried out by the responsible batching plant itself before the first use of the screed mortar.

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PROCESSING INFORMATION

Base materials
- CEM I or II (A-types preferred) to BS EN 197-1
- Aggregate to BS EN 13139
- Use of limestone filler is recommended

Formulation
- Observe dosage (2.5 – 4.0 M-% of cement weight).
- Dosage of CONTOPP® Flowplus FRA should be carried out in the last third or after complete addition of the mixing water.
- Water-cement ratio < 0.90
- Sufficient mixing time is to be ensured.
- To obtain a sufficiant applicable consistency on site (generally > 200 mm) add W/c-ratio of 0.02 per m^3 to increase in consistency by 10 mm (flow table test) into the turning drum of the transport mixing truck. Ensure sufficient mixing time (at least 1 minute per m^3).
- CONTOPP® Flowplus FRA is compatible with all pure-phosphate based retarders.

SPECIAL INFORMATION

Safety
- The general industrial hygiene is to be observed when using our products.
- CONTOPP® Flowplus FRA is chloride free, solvent-free and building-biologically safe.
- In case of correct storage our products are not subject to decomposition. Stability and reactivity are therefore not influenced by storage up to 12 months. Agitate admixture before first use.
- Further information about handling CONTOPP® Flowplus FRA is provided in our safety data sheets.

GENERAL INFORMATION

Standards and test regulations
- DIN 18560: Screeds in the building industry
- BS EN 13139: Aggregates of mortar.
- BS EN 197-1: Cement – Part 1: Composition, requirements and conformity criteria of normal cement.

Comment
The raw materials processed by us and products produced by us are subject to stringent factory inspections. No additives from other manufacturers may be used when this product is used. We therefore point out that our products and the process therefore have to be tested for their suitability for the building site conditions to be expected. The quality of the screed depends substantially on the sand and cement quality, mixing ratios and processing in accordance with the recognized rules of screed technology. Since we do not have any control over the building site conditions or the construction work, no statutory liability can be derived from this leaflet. With the publication of this leaflet all previous versions lose their validity.

Version
20.07.2023