



# CONTOPP®

## FLOWPLUS FR

Article Number: 04.200

Technical  
data  
sheet

### Function

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

## CHARACTERISTIC

### 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

### Key data

|                         |   |
|-------------------------|---|
| Color:                  | transparent   |
| Form:                   | liquid  |
| pH – value:             | 8,0 ± 1,0   |
| Density (at 20 °C):     | 0,97 ± 0,02 g/cm <sup>3</sup>                                       |
| Chlorine content:       | ≤ 0,10 M-%  |
| Alkali content:         | ≤ 8,5 M-% (as Na <sub>2</sub> O-equivalent)                         |
| Valid solids content:   | 81 M-% (calculated)   |
| Processing temperature: | above + 5 °C  |
| Shelf life:             | approx. 12 months – store protected from the sun and frost          |
| Form of delivery:       | 20 kg PE-HD can net<br>210 kg poly-drum net<br>960 kg Container net |

## TECHNICAL DATA

### Mixing model

| Mix design per m <sup>3</sup> |                      | Unit |
|-------------------------------|----------------------|------|
| Cement <sup>1)</sup>          | 350                  | kgs  |
| Filler (e.g. lime stone)      | 200                  | kgs  |
| Aggregates 0/8 <sup>2)</sup>  | 1400                 | kgs  |
| CONTOPP® Flowplus FR          | 8 - 14 <sup>3)</sup> | kgs  |
| w/c-ratio                     | ca. 0.80             |      |
| Flow table test <sup>4)</sup> | ca. 240              | mm   |

### Strength

| Parameter (after 28 days) |               | Unit              |
|---------------------------|---------------|-------------------|
| Flexural bending strength | F4            | N/mm <sup>2</sup> |
| Compressive strength      | C20           | N/mm <sup>2</sup> |
| Pull-up strength          | ca. 1.0       | N/mm <sup>2</sup> |
| 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 Hügerrmann 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 FR 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.



**Technical  
data  
sheet**

**Base materials**

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

**Formulation**

- Observe dosage (2.5 – 4.0 M-% of cement weight).
- Dosage of CONTOPP® Flowplus FR 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 sufficient applicable consistency on site (generally > 200 mm) add 0.4 ltr./m<sup>3</sup> per 10 mm increase in consistency into the turning drum of the transport mixing truck.
- CONTOPP® Flowplus FR is compatible with all pure-phosphate based retarders.

**Safety**

- The general industrial hygiene is to be observed when using our products.
- CONTOPP® Flowplus FR 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 FR is provided in our safety data sheets.

**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**

01.07.2021

**PROCESSING  
INFORMATION**

**SPECIAL  
INFORMATION**

**GENERAL  
INFORMATION**