



# Sopro HF-S 563

## High-strength floor-levelling compound



Heavy-duty, flow-applied, rapid-set, cementitious floor-levelling compound for creation of smooth, unbroken surfaces in residential, commercial and industrial facilities. Excellent workability and hardened mortar properties thanks to Sopro Mikrodur® technology.

Low-chromate to Regulation (EC) No 1907/2006, Annex XVII.

- Heavy-duty
- Self-levelling
- Rapid-setting
- Pumpable
- Suitable for floor heating systems
- EMICODE system of GEV (German Association for Control of Emissions in Products for Flooring Installation): EC1<sup>PLUS</sup> R ("very-low-emission-plus") rating
- DGNB (German Sustainable Building Council): Top quality level 4, Line 8<sup>2)</sup>
- For indoor and outdoor use

### Use

Floor-levelling compound for creation of smooth, unbroken, finished floor surfaces both indoors and outdoors, e.g. in workshops, factory halls, storerooms, garages, basements, cellars etc. Outdoors, Sopro HF-S 563 is only suitable for production of finished surfaces when used in conjunction with SoproDur® HF-L 513 high-strength epoxy protective coat and silica sand (for adequate slip resistance).

### Suitable substrates

Cement screeds, concrete and unfinished concrete surfaces (min. 3 months old), existing ceramic and terrazzo coverings; heated floor constructions.

### Coat thickness

4–40 mm; for thickness upwards of 10 mm, may be extended by up to 1/3 of prepared compound volume using 0–4 mm or 0–8 mm graded silica sand

### Mixing ratio

4.5–5.0 ltr water : 25 kg Sopro HF-S 563; take care to ensure exact proportioning of water

### Flow table value

24.0–25.0 cm (Vicat ring to DIN 1164; size: internal diameter 65 mm at top and 75 mm at bottom, height 40 mm; on suitable, dry, clean glass plate)

### Working life

30–40 minutes; stiffened mortar shall not be retempered by addition of water or fresh mortar to restore workability.

### Walkable

After 2–3 hours

### Ready to receive floor covering/fully loadable

After 2–3 hours for ceramic finish; after 24 hours for natural stone finish; applicable maximum permissible moisture content  $\leq 1.8\%$  CM shall, as a general requirement, be confirmed by CM measurement prior to flooring installation. Particularly impervious floor coverings, e.g. linoleum, PVC, parquet etc., can – depending on filler coat thickness – be applied at earliest:  
 – up to 4 mm coat thickness: after approx. 1 day  
 – 4–10 mm coat thickness: after 3–4 days  
 – 10–40 mm coat thickness: after 5–9 days

### Application temperature

Between +5°C and max. +25°C

### Coverage

Approx. 1.7 kg/m<sup>2</sup> per mm coat thickness

### Abrasion resistance

From min. 8 mm coat thickness, able to accommodate loads from lift stackers; suitable for pneumatic- and solid-rubber-tyred vehicles (industrial trucks); castor chair resistance: suitable (for castors to EN 12 529) upwards of min. 4 mm coat thickness

### Floor heating

Suitable

<sup>1)</sup> See TKB (German Technical Committee for Construction Adhesives) data sheet 14 "Rapid-hardening cementitious screeds and cementitious screeds with screed admixtures" issued on 11 August 2015 by Industrieverband Klebstoffe e.V. (German Adhesives Industry Association).

<sup>2)</sup> Based on DGNB (German Sustainable Building Council) criterion "ENV1.2 Local Environmental Impact" (2015 version).

## Shelf life

Approx. 6 months, subject to storage in original unopened containers

## Packaging

25 kg bag

## Properties

Sopro HF-S 563 is a heavy-duty, flow-applied, rapid-set, cementitious floor-levelling compound with extremely high compressive strength, flexural tensile strength and abrasion resistance. Compressive strength after 28 days approx. 45 N/mm<sup>2</sup>, flexural tensile strength after 28 days approx. 11 N/mm<sup>2</sup>, abrasion resistance (Böhme test) A12. Sopro HF-S 563 is low-chromate, suitable for both indoor and outdoor use, and can be machine applied. Excellent workability and hardened mortar properties thanks to Sopro Mikrodur<sup>®</sup> technology.

## Substrate preparation

Substrate shall be dry, strong, crack-free, dimensionally stable and free from adhesion-improving substances (e.g. dust, oil, wax, release agent, efflorescence, laitance, paint, lacquer and varnish residue, old flooring adhesive residue).

Patch holes, chips and spalls with Sopro RS 462 repair filler. Fill any existing cracks in screed with structurally bonding Sopro GH 564 casting resin.

Calcium sulphate screeds shall exhibit a moisture content  $\leq 0.5\%$  CM and be adequately ground, vacuum-cleaned and primed. Cement screeds shall be 28 days old and dry. Screeds incorporating Sopro Rapidur<sup>®</sup> B1 binder are ready to receive tiles after only approx. 6–12 hours. Prior to flooring installation, screeds incorporating heating elements shall be heated up and allowed to cool in accordance with relevant procedures and standards: required moisture content for cement screeds  $\leq 2.0\%$  CM, for calcium sulphate screeds  $\leq 0.3\%$  CM.

Incorporate a suitable Sopro perimeter insulation strip at junctions with vertical elements to prevent restraint and escape of self-levelling compound. Where perimeter insulation strips are already incorporated in substrate, adopt same line and width of these strips.

Sopro AFS 561 anhydrite floor-levelling compound is recommended for calcium sulphate and mastic asphalt screeds.

Assessment of substrate shall comply with relevant standards and regulations.

Pull-off strength of substrate shall average at least 1.5 N/mm<sup>2</sup> and shall be no less than 1.0 N/mm<sup>2</sup> at any location.

Concrete surfaces shall be prepared by sand or shot blasting.

## Priming

**Sopro HE 449 bonding emulsion:** For wet-on-wet application after short flash-off time of 10–15 minutes (max. 30 minutes). No liquid Sopro HE 449 shall remain on surface. Any dried films shall be removed. Suitable substrates include: cement screeds, unfinished concrete surfaces (min. 3 months old); existing ceramic, terrazzo, natural and cast stone coverings, existing firmly adhering screed coatings.

**Sopro GD 749 primer:** All mineral, high- or variable-suction substrates, e.g. cement screeds, concrete and unfinished concrete surfaces (min. 3 months old). Sopro GD 749 primer shall be applied in undiluted form.

**Sopro HPS 673 bonding primer:** All smooth, non-absorbent substrates, e.g. existing ceramic, terrazzo, natural and cast stone coverings or firmly adhering adhesive residue.

**Sopro MGR 637 multi-purpose primer/Sopro EPG 522 epoxy primer:** Moisture-sensitive substrates, e.g. magnesium oxychloride (magnesite) screeds and calcium sulphate (anhydrite and self-levelling anhydrite) screeds

## Application

Fill clean container with 4.5–5.0 ltr water, add 25 kg Sopro HF-S 563 and mix mechanically to homogeneous, lump-free consistency. Pour mixed compound onto prepared substrate and spread uniformly using squeegee or finishing trowel. If required, use spiked roller or screeding rod to release air. For application to larger areas, Sopro HF-S 563 may also be placed using pumping equipment.

Wherever possible, levelling compound shall be applied to required thickness in a single coat. If, in specific cases, application in several coats proves necessary, each coat shall be given adequate time to achieve walkability and be pretreated with Sopro HE 449 bonding emulsion prior to application of following coat.

Indoors, where exposed to high temperatures, draughts or strong sunshine, freshly applied coat shall be covered with sheeting to ensure optimum, crack-free curing. Do not apply outdoors in heavy wind, rain or where exposed to direct sunshine.

Where subject to heavy loads, e.g. from fork-lift trucks, Sopro HF-S 563 shall always be applied to a minimum thickness of 8 mm. Where applied as finished floor surface outdoors or in areas subject to chemical loads, Sopro HF-S 563 shall be sealed using SoproDur<sup>®</sup> HF-L 513 high-strength epoxy protective coat (blinded with Sopro QS 511 coarse silica sand). Surfaces exposed to oil or petrol shall be protected by a suitable coating (Sopro ÖS oil barrier).

### Specified times

Apply for normal temperature range of +23°C and 50% relative humidity; higher temperatures shorten and lower temperatures lengthen these times.

### Tools/tool cleaning

Mixing attachment, squeegee, finishing trowel, mixing pump, spiked roller; wash tools with water immediately after use.

### Licence

**EMICODE system of GEV (German Association for Control of Emissions in Products for Flooring Installation):** EC1<sup>PLUS</sup>R ("very-low-emission-plus") rating

### Safety precautions

Labelling in accordance with Regulation (EC) No 1272/2008 (CLP)

GHS05

**Signal word:** Danger

Contains Portland cement. Exhibits strong alkaline reaction upon contact with moisture/water; protection required for skin and eyes. All standard precautions for the handling of construction materials/chemicals shall be taken.

**Hazard statements:** H318 Causes serious eye damage.


**Precautionary statements:** P102 Keep out of reach of children. P261 Avoid breathing dust. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 IF ON SKIN: Wash with plenty of water and soap. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor. P332+P313 If skin irritation occurs: Get medical advice/attention.

**GISCODE (German hazardous substances classification):** ZP 1 - Low-chromate to Regulation (EC) No 1907/2006, Annex XVII

### Disposal

Waste treatment methods. Recover if possible. In so doing, comply with the local and national regulations currently in force. 91/156/EEC, 91/689/EEC, 94/62/EC and subsequent amendments. Disposal of hardened product (EC waste code) : 17 01 01. Disposal of not hardened product (EC waste code) : 17 01 01. The suggested European waste code is just based on the composition of the product. According to the specific process or application field a different waste code may be necessary.

### CE marking

	 <b>Sopro Bauchemie GmbH</b> Biebricher Straße 74 – 65203 Wiesbaden (Germany) www.sopro.com
	11 CPR-DE3/0563.1.eng EN 13813 CT-C40-F10-A12 Sopro Fließspachtel hochfest HF-S 563 Cementitious screed material for internal use
Reaction to fire	Class A2 <sub>n</sub> -s1
Release of corrosive substances	CT
Water permeability	NPD
Water vapour permeability	NPD
Compressive strength	C40
Flexural strength	F10
Wear resistance	A12
Sound insulation	NPD
Sound absorption	NPD
Thermal resistance	NPD
Chemical resistance	NPD
Release of dangerous substances	see SDS

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