

Sopro HF-S 563 High-Strength Floor Levelling Compound

Sopro HF-S 563 high-strength floor levelling compound is a heavy duty, pumpable, rapid-set, cementitious floor levelling compound for creation of smooth, unbroken surfaces in residential, commercial and industrial facilities. Low-chromate to Regulation 1907/2006 EC, Annex XVII. systems. Tested to CT-C45-F11-A12; DIN EN 13813.

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

Field Of Application

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

Suitable Substrates

Cement screeds, concrete and untreated concrete surfaces (min. 3 months old), existing ceramic and terrazzo coverings, magnesium oxychloride (magnesite) screeds and board subfloors; heated floor constructions.

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/mm², flexural tensile strength after 28 days approx. 11 N/mm², 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® technology.

Substrate Preparation

The substrate must be dry, strong, crack-free, dimensionally stable and free from adhesion-impairing 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 or Sopro SP 770 rapid-set filler. Fill any existing cracks in screed with structurally bonding Sopro GH 564 casting resin. Calcium sulphate screeds should exhibit a moisture content ≤ 0.5 CM and be adequately ground, vacuum-cleaned and primed. Cement screeds should be 28 days old and dry. Screeds incorporating Sopro Rapidur® B1 binder are ready to receive tiles after only approx. 12 hours. Prior to flooring installation, screeds incorporating heating elements should be heated up and allowed to cool in accordance with relevant procedures and standards: required moisture content for cement screeds ≤ 2.0% CM, for calcium sulphate screeds ≤ 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 must comply with relevant standards and regulations. Pull-off strength of substrate should average at least 1.5 N/mm² and should be no less than 1.0 N/mm² at any location. Concrete surfaces can 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 should remain on surface. Any dried films must 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 special 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.

* Based on DGNB (German Sustainable Building Council) criterion 'ENV1.2 Local Environmental Impact' (2015 version).

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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 should be applied to required thickness in a single coat. If, in specific cases, application in several coats proves necessary, each coat must 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 should 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 must 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 should be sealed using SoproDur® HF-L 513 high-strength epoxy protective coat (blinded with Sopro QS 511 coarse silica sand). Surfaces exposed to oil or petrol must be protected by a suitable coating (Sopro ÖS oil barrier).

Packaging

25kg bags.

Licence

EMICODE system of GEV (German Association for Control of Emissions in Products for Flooring Installation): EC1^{PLUS} R ('very-low-emission-plus') rating.

Storage

Approx. 6 months, subject to storage on pallets in dry conditions in original unopened containers.

Disposal Considerations

13.1. 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.

Safety

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 must be taken. See detailed Sopro Health and Safety Data Sheet for further information.

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

Technical Information

Coat Thickness	4 – 40 mm; for thickness upwards of 10 mm, up to 1/3 of the prepared compound volume may be extended using 0 – 4 mm or 0 – 8 mm graded silica sand.
Mixing Ratio (water only)	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 (Vicacat 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)
Pot Life	30 – 40 minutes; stiffened mortar must not be retempered by addition of water or fresh mortar to restore workability.
Walkable	After 2-3 hours.
Coverage	Approx. 1.7 kg/m ² per mm coat thickness
Ready to Receive Floor Covering/ Fully Loadable	As finished floor surface: after 24 hours per centimetre coat thickness; for subsequent tiling: after 12 hours.
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
Specified Times	Apply for normal temperature range of +23 °C and 50 % relative humidity; higher temperatures shorten and lower temperatures lengthen these times.
Application Temperature	Between +5 °C and +25 °C
UFH	Suitable
Tools and Cleaning	Mixing attachment, squeegee, finishing trowel, mixing pump, spiked roller; wash tools with water immediately after use.
Test Reports	Available on request

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11 CPR-DE3/0563.1.eng EN 13 813:2002 CT-C45-F11-A12 Sopro HF-S 563 Cementitious screed material for internal use	
Reaction to fire	class A2_{fl}-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 MSDS

NPD Properties not determined as they are not relevant (No Performance Determined)

