

smet

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^{PLUS} ("very-low-emission-plus") rating
- DGNB (German Sustainable Building Council): Top quality level 4, Line 8²⁾
- 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

Ready to receive ceramics and cast stone after 2 – 3 hours; natural stone after 24 hours. For elastic, textile, laminate, parquet and wood block floor coverings, maximum permissible moisture content ($\leq 1.8\%$ CM) shall be confirmed by CM measurement over full screed cross-section prior to flooring installation. Empirical values for achievement of this – in function of filler coat thickness, subject to application to dry substrate – are as follows:

- Up to 4 mm coat thickness: after approx. 1 day
- 4–10 mm coat thickness: after approx. 3 – 4 days
- 10–40 mm coat thickness: after approx. 5 – 9 days

Application temperature

Between +5°C and max. +25°C

Coverage

Approx. 1.7 kg/m² 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

¹⁾ 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 Industrierverband Klebstoffe e.V. (German Adhesives Industry Association).

²⁾ 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/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

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® 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/mm² and shall be no less than 1.0 N/mm² 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® 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^{PLUS} ("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

Disposal considerations. 13.1. Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

A waste code (EWC) according to European List of Waste (LoW) cannot be specified, due to dependence on the usage. Contact and send to an authorized waste disposal service.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of

environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Hazardous waste: Yes

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

CE marking

	 Sopro Sopro Bauchemie GmbH 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 _s -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

bringing european innovation



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