Sopro Rapidur® B5

Rapid-set screed binder

Special polymer-modified binder for particularly economical production of high-strength, rapid-set cement screeds to DIN 18 560, allowing early flooring installation. Achieves grade CT-C45-F7 after 28 days[1]. Low-chromate to Regulation (EC) No 1907/2 06, Annex XVII.

- **New, enhanced quality**
- **Ready for tiling after approx. 3 days**
- **Long working life: approx. 2–3 hours**
- **May be applied in mixing ratios 1:4 and 1:5**
- **High resistance to moisture migration from substrate**
- **Suitable for renovation and refurbishment schemes**
- **Suitable for floor heating systems**
- **Pumpable**
- **EMICODE system of GEV (German Association for Control of Emissions in Products for Flooring Installation): EC1PLUS ("very-low-emission-plus") rating**
- **For indoor and outdoor use**

Use

For production of rapid-set bonded screeds, unbonded screeds (on separating or insulation layer) or heated screeds, allowing early flooring installation.
For cement screeds to DIN 18 560 allowing early loading and flooring installation, particularly suitable for renovation and refurbishment schemes.

Mixing ratio

Mixing ratio 1:4 = 25 kg Sopro Rapidur® B5 : 100 kg 0–8 mm screed sand to DIN EN 12 620 (15 shovelfuls) : 7.5–8.5 ltr water (depending on sand moisture and mortar consistency). w/c ratio 0.30–0.34.
Mixing ratio 1:5 = 25 kg Sopro Rapidur® B5 : 125 kg 0–8 mm screed sand to DIN EN 12 620 (20 shovelfuls) : 9.0–10.0 ltr water (depending on sand moisture and mortar consistency). w/c ratio 0.36–0.40.
Particle distribution (grading curve) for aggregate (screed sand) shall fall within A8/B8 range under DIN 1045 Part 2, Annex L, Diagram L.1, and shall exhibit an adequate, though not overly high proportion of fine sand; percentage passing a 0.25 mm sieve: approx. 7–10 %.

	200 ltr screed mixer	
Mixing ratio	1:4	1:5
Binder (kg)	75	62.5
Binder (bag)	3	2.5
Dry 0/8 sand (kg)	300	300
Dry 0/8 sand (shovelfuls)	Approx. 45–50	Approx. 45–50
Water (ltr)	22.5–25.5	21.6–24.0
w/c ratio	0.30–0.34	0.36–0.40

Strength class

	After 1 day	After 3 days	After 5 days	After 28 days
MR 1 : 4	CT-C20-F4	CT-C35-F5	CT-C45-F5	CT-C60-F7
MR 1 : 5	CT-C16-F3	CT-C25-F4	CT-C30-F4	CT-C45-F7

Application temperature

From +5 °C to +25 °C (substrate, air, material)

[1] Mixing ratio: 1 : 5 (25 kg Rapidur® B5 : 125 kg 0–8 mm screed sand to DIN EN 12 620)

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Working life	Approx. 2–3 hours[1)]
Walkable	After 7–8 hours[1)]
Ready to receive floor covering	For tiling: after approx. 3 days; for impervious coverings: after 3–5 days and after achievement of residual moisture content ≤ 1.8% CM
Coat thickness	Maximum and minimum screed thickness depends on incorporated aggregate. Screed shall be at least three times and at most ten times as thick as maximum particle diameter of aggregate. Recommended grading of screed aggregate 0–8 mm; coat thickness approx. 25–80 mm.
Coverage	MR 1:4 Approx. 4.0 kg/m² per cm thickness MR 1:5 Approx. 3.5 kg/m² per cm thickness
Castor chair resistance	Suitable (for castors to DIN 68131)
Floor heating	Suitable, max. flow temperature +55 °C
Shelf life	Approx. 12 months, subject to storage on pallet in dry conditions in original unopened containers
Packaging	25 kg bag
Substrate preparation	Substrate shall be clean, solid, strong, dimensionally stable and free from any adhesion-impairing substances. In the event of possible moisture action from adjoining elements, e.g. concrete substrates, an effective waterproof membrane (to DIN 18534) is required for floating screeds. For bonded screed constructions, where necessary mechanically roughen substrate, suction clean, pre-wet and prime with Sopro HSF 748 flexible bonding slurry with trass or Sopro's No.1 flexible tile adhesive. Lay screed wet on wet. For heavier-duty applications, wet-on-wet application to Sopro EPG 522 epoxy primer (or, alternatively, Sopro BH 869 construction resin) is recommended. All relevant standards, guidelines and recommendations shall apply; workmanship shall comply with good practice.
Notes on use with floor heating system	Suitable for heated screeds with max. +55 °C flow temperature. Prior to laying tiles or other floor coverings, screed shall be heated up and allowed to cool in accordance with basic procedures required for traditional cement screeds. Heating phase shall commence at earliest 72 hours after screed laying. During first heating cycle, a +25 °C flow temperature shall be maintained for three days. System shall then be set to maximum flow temperature, to be maintained for a further four days, before being lowered to laying temperature.

[1)] Mixing ratio: 1 : 5 (25 kg Rapidur® B5 : 125 kg 0–8 mm screed sand to DIN EN 12 620)

Application

All standard screed mixing and pumping equipment may be used in conjunction with Rapidur® B5.
Mixing ratio 1:4 = 25 kg Sopro Rapidur® B5 : 100 kg 0–8 mm screed sand to DIN EN 12 620 (15 shovelfuls) : 7.5–8.5 ltr water (depending on sand moisture and mortar consistency).
Mixing ratio 1:5 = 25 kg Sopro Rapidur® B5 : 125 kg 0–8 mm screed sand to DIN EN 12 620 (20 shovelfuls) : 9.0–10.00 ltr water (depending on sand moisture and mortar consistency).

Mix screed to an earth-moist consistency. No other cements or screed admixtures shall be added. Mixing, placing and trowelling shall be performed in immediate succession. Only lay screed sections that may be completed within working life of mortar. Stiffened material shall not be retempered by addition of water or mixing with fresh material to restore workability. Required screed thickness shall be determined in function of loads and flooring type in accordance with DIN 18 560. Whenever works are interrupted, thoroughly clean mixers, pumps and hoses without delay.
Note: Screed constructions are heavy-duty building elements that require careful design, co-ordination and workmanship. For this reason, please observe guidance in data sheet entitled "Information for clients regarding the period after installation of cement screeds on separating and/or insulation layers" issued by BEB (German Federal Association of Screed and Floor Covering).

Tiling and other flooring works

Screeds incorporating Sopro Rapidur® B5 are ready for tiling after approx. 3 days. Maximum permissible moisture content ≤ 2.0% CM shall be confirmed by CM measurement, as basic requirement, prior to flooring installation.
Particularly impervious floor coverings, e.g. linoleum, PVC etc., shall be laid after 3 – 5 days and after achievement of residual moisture content ≤ 1.8% CM.
Wood floor finishes, e.g. parquet, shall be governed by guidelines set out in relevant BEB data sheet 8.1 "Assessment and preparation of substrates. Laying of elastic and textile floor coverings, laminate, parquet and wood blocks. Heated and unheated floor constructions".
General screed requirements prior to flooring installation: exact compliance is required with specified mixing ratio, water/cement ratio and application temperature.
All approved floor laying products in Sopro range may then, in principle, be used for subsequent laying of tile, mosaic, natural stone and cast stone coverings. To achieve early walkability of floor covering, use of Sopro's rapid-set products is particularly recommended. Sopro FS 15 550, for example, is recommended for any necessary surface filling or floor levelling.

Specified times

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

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, GHS07
Signal word: Danger

Contains Portland cement, calcium oxide, calcium hydroxide, complex mixture of calcium and magnesium silicates and aluminates. 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: H315 Causes skin irritation. **H318** Causes serious eye damage. **H335** May cause respiratory irritation.

Precautionary statements: P102 Keep out of reach of children. **P103** Read label before use**. P261** Avoid breathing dust. **P264** Wash hands thoroughly after handling. P280 Wear protective gloves/clothing and eye/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **P312** Call a POISON CENTER if you feel unwell. **P501** Dispose of contents/container in accordance with applicable regulations.

Disposal

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. Empty containers or liners may retain some product residues. Do not re-use empty containers.