

## PBG – FOAM CONCRETE FOR FLOOR LEVELLING LAYERS

Modifications: **PBG 35, 40, 45, 50** / CEM II 32,5R

Data Sheet No. 115

**Product:** Slurry cement mixture lightened with technical foam, produced in SIRCONTEC MS 1000 machine in the construction site. It has self-levelling ability, is to be applied under anhydrite self-levelling screed with min. thickness of 3.5 cm, cement self-levelling screed with min. thickness of 3.5 cm, manually processed cement screed with min. thickness of 4.5 cm.

**Utilization:** Filling (levelling) floor layers in various constructions. Instructions and recommendations of SIRCONTEC company must be followed in production and application. A determined bearing layer is always to be applied on the PBG layer.

Utilization of PBG types according to the temperature of both the atmosphere and the structure in the place of application:

PBG		35	40	45	50
Application temperature	°C	above +15	above +12	above +8	above +5
Walkability at 20°C	hours	max. 72	max. 56	max. 40	max. 24
Min. / max. application thickness of PBG material	mm	45/400	40/400	35/400	30/400
Pumping head achieved by SIRCONTEC pumps	m	100			

**Composition:**

Cement, water, technical foam, admixtures, additives. Dosing of individual components is defined in SIRCONTEC manufacturing procedures depending on the bonding agent type used.

**Properties:** If determined Production Conditions are observed, its volume does not decrease in the period of setting and hardening. It is a self-levelling liquid substance capable of achieving required flatness, perfectly filling any irregularities. Processing is identical to that of self-levelling screeds.

It optimizes thickness of the bearing layer.

Depending on the type of application and the treatment method, uncontrollable shrinking cracks may appear in PBG during hardening, sometimes even exceeding dilatation sections. These shrinking cracks are not considered a defect.

**Base:** Reinforced concrete ceiling slab, ceramic, concrete prefabricated, wooden ceiling, possibly other ceiling structures. The base must be leakage proof.

**Technical data:**

PBG		35	40	45	50
Density after 28 days	kg/m <sup>3</sup>	330 - 380	380 - 430	430 - 480	480 - 530
Natural moisture content (% by weight)	%	8 - 12			
Compression strength after 28 days / 20°C	MPa	0,45	0,7	1,0	1,2
Thermal conductivity of the dry substance - λ	W/mK	from 0,085	from 0,09	from 0,10	from 0,11
Inflammability	class	A1- nonflammable			

The Technical Data apply to PBG produced from CEM II 32,5R class cement.

Step noise dampening values of various SIRCONTEC floor compositions – see DS No. 209.

Technical Certificate for SR: TSÚS TO-08-0071, for CR: TZÚS STO 060-29409, for Poland ITB AT-15-812/2009.

**Quality control:**

The quality control of the produced PBG is subject to Control Procedures and Inspection and Test Plan.

Samples of the material being produced are assessed by an authorised person – see Technical Certificates TSÚS TO-08-0071, TZÚS STO 060-29409 and ITB AT-15-812/2009, their previews can be downloaded from [www.sircontec.com](http://www.sircontec.com). PBG is produced from certified materials.

**Processing: 1. Base:**

Before starting the work it is necessary to verify its compactness and dampness. The base must be clean, without cement milk and grease residues, without efflorescence, and its particles must not become loose. The PBG mixture must be separated from walls by non-absorbent flexible material.

**2. Application:**

Fresh PBG mixture is delivered to the place of application by a pump. While being pumped it is evenly spread over the surface. While constantly checking thickness of the material being poured, the fresh mixture is to be processed like a self-levelling screed. Straight edger can be used in the processing.

**3. Maturing:**

The PBG mixture, after having been processed, behaves like a standard cement mixture. In setting and hardening stages the PBG can be deteriorated due to excessive load and other improper use. Surface of the PBG mixture must be protected against premature and uneven evaporation of the batch water resulting from direct sunlight, draught and wind. Foam concrete is not designed as the final surface layer in floor structures. It must be protected against possible damage in a proper way.

**4. Site facilities for using MS 1000/m machine:**

Electric connection: 400 V/50 Hz, line protection min. 32 A, "C" design of the circuit breaker

Drinking water supply: min. 3/4" yielding min. 2 l/sec

Access: Access road must be passable for a van and permanent accessibility is needed.

**Cleaning:** Tools are cleaned with pure water. Dirty surfaces can be cleaned by wiping off the fresh mixture or removing the hardened mixture mechanically.

**Safety and hygiene:**

It has an alkaline reaction in the fresh state. Eyes and skin must be protected during work. Wash off the affected place with pure water immediately. When complications occur, find medical help immediately. While in the fresh state it must be protected from access of children. The mixture is hygienically harmless after having matured.

Validity: from 1 Nov 2009