

LEVELLING COMPOUND, ITS USE AND MANUFACTURE

The invention relates to a ready to use, pasty or preferably liquid levelling (or smoothing) compound
5 (mixture or putty or spackle or sealant) that for example allows to or is constructed/set up to coat a subfloor as basis for a floor covering on its upper surface, its use to coat and/or level (or render smooth) a subfloor and a corresponding process for coating and/or levelling a
10 subfloor and a method for its manufacture.

Levelling materials to be coated e.g. on subfloors need to fulfill certain requirements in distinction from coatings of walls and ceilings. Among them especially the
15 requirement of compression resistance as well as flexural strength and pressure resistance are to be mentioned, allowing to resist the stresses caused by heavy objects such as furniture or people walking on the floor and the like. Also the formation of cracks due to shrinkage during
20 hardening is to be avoided. According to the standard EN 13813 established for screeds, bond strength classes are defined for different screed materials. The bond strength expressed in N/mm^2 is determined according to the standard EN 13892-8. The German association for screeds and flooring
25 (BEB - Bundersverband Estrich und Belag e.V.) recommends that the bond strength for screeds are greater or equal to 0.5 N/mm^2 , the specific given values depending on the kind of covering elements (tiles, textiles...).

30 Up to now, hydraulically hardening mineral mortars or putties were used to fulfill these requirements which also could be managed to (chemically) harden within an appropriate period of time, e.g. some hours to 24 hours.

Polymer dispersion based coating compounds (mixtures), due to the requirement of water evaporation allowing for the (physical) hardening, were considered not appropriate for levelling compounds that exceed a thickness of about 1 mm and therefore were not used for floor levelling but only as coating compositions.

It has now surprisingly been found that a one component compound comprising a combination of an aqueous polymer dispersion, a water glass (solution of alkali silicate(s) in water), a filler (e.g. an aluminosilicate) with gaseous inclusions (and thus pores and/or capillaries) and a spreading composition and optionally other additives allows for application (coating) in a thickness of up to 10 mm, e.g. up to 9, 8, 7, 6 or especially 5 mm, nevertheless to achieve hardening within an appropriate time, e.g. 24 hours or less, and to achieve the required physical robustness also appropriate for use in floor levelling.

The invention therefore relates, in a first embodiment, to a ready to use one component (especially floor) levelling compound (putty or mixture) comprising a combination of an aqueous polymer dispersion, a water glass (solution of alkali silicate(s) in water), a filler (e.g. an aluminosilicate) with gaseous inclusions (and thus pores and/or capillaries) and a spreading composition and optionally one or more other additives.

In a second embodiment, the invention relates to the use of a ready to use (especially floor) levelling compound according to the preceding paragraph or as defined below as levelling (smoothing) coating to building substrate, especially a subfloor, especially comprising applying it in a thickness of up to 10 mm, e.g. up to 9, 8, 7, 6 or

especially 5 mm.

In a third embodiment, the invention relates to a process or method of levelling a building substrate, especially a subfloor, comprising applying a ready to use (especially floor) levelling compound as mentioned as first embodiment of the invention to the building substrate, e.g. a subfloor, especially comprising applying it in a thickness of up to 10 mm, e.g. up to 9, 8, 7, 6 or especially 5 mm.

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In a fourth embodiment, the invention relates to a method or process of manufacture of a ready to use (especially floor) levelling compound defined hereinabove and below, especially a floor levelling compound, said method comprising mixing an aqueous polymer dispersion, a water glass (solution of alkali silicate(s) in water), a filler (e.g. an aluminosilicate) with gaseous inclusions (and thus pores and/or capillaries) and preferably a spreading composition and optionally one or more other additives and if not already mixed therein transferring it into one or more containers.

In the following, more general terms or features are defined in a preferred and more specific way, allowing to replace one or more or all general terms by the more specific ones, where each such replacement leads to more specific and more preferred invention embodiments.

Where "a" or "an" is used, this includes "one or more".

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Where percentages are given (in W-%, meaning weight percent), except if not mentioned or derivable otherwise, they refer to the weight of all constituents taken together.

Where (meth)acrylic acid and the like is mentioned, this refers to acrylic, methacrylic or acrylic and methacrylic acid or the respective derivative mentioned, respectively.

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A "ready to use, pasty or liquid (especially floor) levelling (or smoothing) compound" (also nameable mixture or putty or sealant or composition) especially is an aqueous dispersion of the named ingredients and has a
10 viscosity and especially a spreading characteristic (flow characteristic) appropriate for the intended and mentioned use, especially when using a metal cylinder with a diameter of 6.8 cm and a length of 3.5 cm, placing it vertically on a glass plate, filling it with a compound according to the
15 invention and lifting the cylinder a spread over a surface with a diameter of 15 to 50, preferably 20 to 30 cm.

An "aqueous polymer dispersion" is preferably a customary
20 dispersion used for modification of cement and mortar mixtures (e.g. in JP 2010019011 or JP 2010019012) based on an aqueous dispersion of a polymer selected from the group consisting of homopolymers such as vinyl esters, polyesters, poly epoxides or polyamides, or copolymers;
25 e.g. polymers or copolymers comprising one or two or more monomer units obtained from monomers selected from the group consisting of e.g. vinyl acetate, vinyl propionate, vinyl butyrate, vinyl-2-ethyl hexanoate, vinyl laureate, 1-methylvinyl acetate, vinyl pivalate or vinyl esters of
30 alpha-branched monocarbonic acids with 9 to 11 carbon atoms; (meth)acrylic acid esters or amides, such as methylacrylate, methylethylmethacrylate, ethylacrylate, ethylethylmethacrylate, propylacrylate, propylethylmethacrylate, hydroxyethylacrylate, hydroxyethylethylmethacrylate,

hydroxypropylacrylate, hydroxypropylmethacrylate, n-butylacrylate, n-butylmethacrylate, t-butylacrylate, t-butylmethacrylate or 2-ethylhexylacrylate; vinyl aromates, e.g. styrene, methylstyrene or vinyltoluene; olefins, such as ethylene, propylene, 1,3-butadiene and isoprene; 1,3-dienes; and vinylhalogenides, e.g. vinylchloride further (co)polymerizable monomers, such as fumaric acid, maleic acid or its diethyl or diisopropylester or its anhydride, ethylenically unsaturated sulfonic acids or their salts, such as vinyl sulfonic acid, 2-acrylamido-2-methyl-propane sulfonic acid, diallylphthalate, divinyl adipate, diallyl maleate, allylmethacrylate or triallylcyanurate, or crosslinking comonomers, such as acrylamidoglycolic acid, methylacrylamidoglycolic acid methyl ester, N-methylolacrylamide, N-methylomethacrylamide, N-methylisolallylcarbamate, alkyl ethers such as the isobutoxyether or ester of N-methylolacrylamide or -methacrylamide, epoxy-functionalized such as glycidyl methacrylate or -acrylate, silicium functional comonomers, such as acryloxypropyltri(alkoxy)- or -methacryloxypropyltri(alkoxy) silanes, wherein alkoxy is e.g. methoxy, ethoxy or ethoxyethylen- or -propylenglycolethers, diacetone acrylamide and acetylacetoxyethylacrylate or -methacrylate.

Of special interest are for example (meth)acrylic copolymers (products of copolymerization of (meth)acrylic esters, e.g. C₁-C₇alkyl-, e.g. methyl or ethyl, acrylate or C₁-C₇alkyl-, e.g. methyl or ethyl, methacrylate, or of acrylamides or methacrylamides, e.g. N-methoxyacrylamide or N-methoxy-methacrylamide, and other unsaturated monomers, e.g. styrene (preferred), acrylonitrile.

Especially preferred are mixed polymerisates such as co-

polymerisates of two or more, e.g. 3 or 4, monomers selected from the group consisting of styrene, (meth)acrylic acid, C₁-C₇alkyl-(meth)acrylate, such as methyl or ethyl (meth)acrylate (preferred) and
5 (meth)acrylamide. A preferred polymer dispersion is Mowilith VDM 618®.

The polymer dispersion of the liquid component may, in a complete (especially floor) levelling compound according to
10 the invention, be present in an amount of 0.1 to 30 percent by weight (W-%), e.g. from 0.5 to 25 W-%, in a preferred variant from 1 to 20 W-%, calculated as dry polymer (the water content in the polymer dispersion as such (only polymer and water) may e.g. be in the range from 10 to 90,
15 preferably from 30 to 60 W-%).

A water glass (solution of alkali silicate(s) in water) is preferably a potassium, sodium or especially a lithium silicate in water, or a mixture of two or more of such
20 alkali silicates, preferably including lithium silicate. A preferred example is Betolin Li 20®. The water glass may be present in an amount of from 1 to 40 W-%, e.g. from 2 to 20 W-%, preferably from 3 to 10 W-%.

25 "A filler (e.g. an aluminosilicate) with gaseous inclusions (and thus especially with pores and/or capillaries, e.g. causing a high surface area) refers to a material such as an aluminosilicate, such as a corresponding aluminosilicate with a specific surface area (BET, measured according to
30 DIN 66132) of 1 to 10, e.g. 3 to 5 (for example about 4) m²/g and preferably an oil absorption of less than 80, especially less than 70 g/100 g (measured according to DIN ISO 787, T5). This material is preferably present in a compound according to the invention in an amount ranging

from 0.5 to 40 W-%, e.g. from 1 to 20 W-%, preferably from 2 to 10 W-%.

While it is not intended to be bound by that hypothetical
5 explanation, it can be assumed that the capillary and porous status of this filler with gaseous inclusions allows for an accelerated drying, due to capillary forces and/or higher specific surface.

10 As a "spreading composition", an aqueous suspension of a polymer based on polycarboxyl ethers is included, such as Melflux 0417 L® or Melflux 2500 L®, or a mixture of two or more such polymers. The spreading composition can be present in an amount ranging from 0.01 to 5 W-%, e.g. from
15 0.05 to 2 W-%, preferably from 0.1 to 1 W-%.

In addition to the four mentioned ingredients or ingredient classes, further additives may be present.

20 Apart from the ingredients/constituents mentioned so far and preferably, one or more further constituents (additives) may be present, such as water (e.g. in an amount from 1 to 50 W-%, such as 2 to 30 W-%, e.g. 4 to 20 W-%); defoamers (e.g. on silicone basis or without
25 silicone, for example a defoamer based on an aqueous emulsion of a polysiloxane copolymer with hydrophobic silica, such as Agitan 150®, e.g. in an amount of 0.05 to 5 W-%, such as 0.1 to 1 W-%, preferably 0.2 to 0.5 W-%); thickeners, e.g. on the basis of modified cellulose,
30 bentonite, amorphous/disperse silica, polyurethane or acrylate or mixtures of two or more thereof, such as Tylose H 20 P2® (a hydroxyethylcellulose) or methylcellulose, e.g. in an amount from 0.005 to 1 W-%, such as 0.008 to 0.5 W-%, preferably from 0.01 to 0.05 W-%; a (micro)biocide, for

example MIT, BIT, CMIT or a mixture of two or more thereof, e.g. Acticide MBS 5050®, e.g. in an amount from 0.001 to 2 W-%, such as 0.005 to 1 W-%, preferably 0.01 to 0.2 W-%, a dispersion stabilizer (in order to inhibit or delay sedimentation, e.g. based on Carrageenan, Cellulose gum, diutan gum, gellan gum, whey protein concentrate, pectin, locust bean gum, xanthan gum or γ -polyglutamate or other dispersion stabilizer, or mixtures of two or more thereof, for example from Kelco such as Kelco Crete DG-F1, e.g. in an amount from 0.0005 to 5 W-%, such as 0.001 to 2 W-%, preferably from 0.005 to 0.8 W-%); a dispersant, e.g. an anionic, cationic and/or non-ionic detergent, especially salt modified phosphonic acid, e.g. Sapetin D20®, in an amount from 0.01 to 5 W-%, e.g. from 0.05 to 3 W-%, preferably from 0.1 to 0.5 W-%), or two or more or all thereof; optionally further including (e.g. polyethylene) fibers, accelerators, retardants, wetting agents, solvents other than water, coloring agents (e.g. dyes or pigments), plasticizers, light- or UV stabilizers or mixtures of two or more thereof. Such additives may be, related to weight of the complete components of the adhesive system according to the invention before use, be present in total amount of from 0.01 to 20 percent by weight, e.g. from 0.05 to 10 percent by weight.

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Also filler can preferably be added and thus present in the final compound, such as sand, carbon black, quartz sand, limestone, stone or mineral flours, glass, corundum or the like, or mixtures of two or more thereof. The filler may be provided in an amount of 2 to 70 W-%, e.g. 10 to 70 W-%, preferably 30 to 70 W-%, for example 30 to 60 W-% and is preferably added in the form of a powder or (e.g. in the case of sand) particles.

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For use also in the covering of other substrates than floors, e.g. walls or ceilings, it is useful to add also a material that gives the compound a more pasty or low-slump, non-sagging consistency, also a rheology influencing material (thickener) may be added, such as one on polymer or silica basis, e.g. a polyurethane based polymer, such as CHE-COAT VT 2P, C.H. Erbslöh GmbH, Krefeld, Germany. This may be added in an amount of from 0.001 to 5, e.g. from 0.005 to 1 W-%.

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Preferably however the use in all embodiments of the invention relates to floor levelling, having bond strength greater or equal to 0.8 N/mm^2 , preferably greater or equal than 1.0 N/mm^2 , measured according to EN 13892-8, after 3 days of drying in a climate chamber maintained at 20°C with 65% of relative humidity.

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"Subfloor" especially relates to any underground for a floor, especially inside buildings, such as houses, theatres, stores, malls or public buildings.

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The compound according to the invention may also be used as finishing coating, especially for floors, and then may also comprise coloring and/or shine contributing additives, e.g. pigments or dyes or silicones or the like, e.g. in an amount from 0.001 to 5, such as 0.005 to 3 W-%.

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"Upper surface" of a floor relates to a floor cover that forms the upper surface of a floor, such as a carpet, a fitted (e.g. wall-to-wall) carpet, a laminate, a parquet, a hardwood flooring, a synthetic floor covering or any other at least potentially (= if not covered with a further material, e.g. a carpet) visible (upper) floor covering.

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"Levelling" or "(to) level") especially refers to the smoothing of roughness, wrinkles, unevenness, projecting areas, pits and recesses or other comparable surface defects.

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The "applying" to a subfloor can be made with any customary tool, e.g. a spattle, a putty knife, a scraper, via tubes, or by other manual or automatic spreading devices.

- 10 A container is preferably a closed or closeable container, e.g. a can or canister or other lidded container, allowing to remove inhomogeneity caused by sedimentation e.g. during stocking and then, after opening, applying to the subfloor. This allows for an especially advantageous and simple
- 15 handling of the floor levelling compounds according to the invention which can thus be stored and used as one component systems.

- The mixing of the ingredients of a floor levelling compound
- 20 according to the invention in the process according to the invention can be achieved by any conventional mixing process, including where required homogenisators, stirrers, lowered pressure, heaters, coolers, a temperature range e.g. in the area from about 0 to about 50 °C, e.g. from 5
- 25 to 35 °C, making into a paste by (preferably cautious, e.g. stepwise) addition of water or the aqueous polymer dispersion and/or the water glass and/or the aqueous spreading composition or any other aqueous ingredient, or two or more of these aqueous ingredients, to one or more of
- 30 the other dry ingredients, and other known mixing and packaging steps.

It is merely essential to avoid the drying during the manufacturing process in order to avoid unintended

hardening before the dispersion is applied to a subfloor.

The invention also relates to the embodiments in the claims
and the abstract and especially the dependent claims, all
5 of which are therefore incorporated into the description as
support thereof.

The following example serves to illustrate the invention
without limiting its scope.

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Example 1: Floor Levelling Compound

A floor levelling compound was mixed with the following
ingredients (in weight percent = W-%):

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Ingredient No.	Ingredient	W-%
1	Water	10.700
2	Tylose H 20 P2	0.013
3	Mix of lime meal (KSM) with Kelco- Crete DG-F1	0.250
4	Mowilith VDM 618	10.000
5	Betolin Li 20	6.500
6	Sapetin D20	0.300
7	Acticide MBS 5050	0.075
8	Sand 0-0.3T	30.000
9	KSM 60/3 Fels	24.062
10	Kraft 9040	12,000
11	aluminosilicate with a specific surface area (BET, DIN 66132) of about 4 m ² /g and an oil absorption of less than 70 g/100 g (DIN ISO 787, T5)	5.450
12	Melflux 0417/45 %	0.300
13	Melflux 2500L 45 %/	0.050
14	Agitan 150	0.300
Σ		100

Table 1

Tylose H 20 P2 is a trademark product sold by ShinEtsu SE Tylose GmbH & Co KG, Wiesbaden, Germany

- 5 Kelco-Crete DG-F1 is a trademark product sold by CP Kelco Germany GmbH, Grossenbrode, Germany

Mowilith VDM 618 is a trademark product sold by Celanese

Emulsions GmbH, Frankfurt/M., Germany

Betolin Li 20 is a trademark product sold by Wöllner GmbH & Co KG, Ludwigshafen, Germany

5 Sapetin D20 is a trademark product sold by Wöllner GmbH & Co KG, Ludwigshafen, Germany

Acticide MBS 5050 is a trademark product sold by Thor GmbH, Speyer, Germany.

KSM 60/3 Fels (Werk Rübeland) is a limestone powder product sold by Holcim Deutschland AG, Hamburg, Germany

10 Kraft 9040LM is a limestone powder product sold by Karl Kraft Steinwerke OHG, Heidenheim, Germany

Melflux 0417 L and Melflux 2500 L are trademark products sold by BASF Construction Solutions GmbH, Trostberg, Germany

15 Agitan 150 is a trademark product sold by Münzing Chemie GmbH, Heilbronn, Germany.

The resulting mixture can be spread on a subfloor with a thickness up to 5 mm. No cracks are formed during drying.

20 When spread in the flow table test, the flow is 25 cm (that is, the material spreads to a surface having a diameter of 25 cm on glass as described above). The bond strength measured according to EN 13892-8 is 1.4 N/mm² after 3 days of drying out at a temperature of 20°C with 65% of relative
25 humidity.

Some drying tests of the resulting mixture have been made with two different thicknesses, respectively 3mm and 5mm. The tests were made in a chamber having 65% relative
30 humidity, and a temperature of 20°C. The weight losses of the samples corresponding to the drying process advancement are measured every 24 hours for a period of 9 days and then after 29 days. For both thicknesses, it appears that more of 95% of the drying out appears within the first 24 hours.

Comparative example:

A floor levelling compound was mixed with the different
5 constituents given in table 1 in the same quantity, but
without ingredient No.11 (aluminosilicate with specific
surface area of about 4 m²/g and an oil absorption of less
than 70 g/100g) and with 29,512 W-% of ingredient 9
(limestone powder KSM 60/3 Fels). All the other ingredients
10 are introduced in the same quantities than those expressed
in table 1.

The floor levelling compound is put into a plate, in a
thickness of 5 mm and the drying out is performed in a
15 climate chamber maintained at 20°C with 65% of relative
humidity. The weight loss of the sample during the drying
out is measured after 1 and 2 days.

Time (days)	Weight of the sample	Weight loss %
0	399.06	0
1	329.14	17.52
2	324.68	18.63

Table 2

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The same drying test is made simultaneously in the same
conditions with the formulation according to the present
invention, comprising aluminosilicate (as detailed in table
1).

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Time (days)	Weight of the sample	Weight loss %
0	399.17	0
1	323.30	19.01
2	315.20	21.04

Table 3

The comparison of the results of the drying tests made with
5 the two different samples clearly show that the formulation
according to the present invention allow to shorten
efficiently the drying out time.

/ claims

CLAIMS

1. A use of a ready to use, pasty or liquid levelling compound that allows to or is constructed/set up to coat a subfloor as basis for a floor covering on its upper surface, said levelling compound comprising a combination of an aqueous polymer dispersion, a water glass, a filler with gaseous inclusions and preferably a spreading composition and optionally other additives, wherein the aqueous polymer dispersion is present in an amount of 0.1 to 30 percent by weight (W-%), calculated as dry polymer; the water glass is present in an amount of from 1 to 40 W-%; and the filler with gaseous inclusions is present in an amount ranging from 0.5 to 10 W-%, as a levelling coating on a subfloor or as a finishing coating for floors.
2. The use according to claim 1, wherein the aqueous polymer dispersion is an aqueous dispersion of at least one polymer selected from homopolymers, especially vinyl esters, polyesters, poly epoxides of polyamides, and copolymers obtained from two or more monomers selected from the group consisting of e.g. vinyl acetate, vinyl propionate, vinyl butyrate, vinyl-2-ethyl hexanoate, vinyl laureate, 1-methylvinyl acetate, vinyl pivalate or vinyl esters of alpha-branched monocarbonic acids with 9 to 11 carbon atoms; (meth)acrylic acid esters or amides, such as methylacrylate, methylethylmethacrylate, ethylacrylate, ethylethylmethacrylate, propylacrylate, propylethylmethacrylate, hydroxyethylacrylate, hydroxyethylmethacrylate, hydroxypropylacrylate, hydroxypropylethylmethacrylate, n-butylacrylate, n-butylethylmethacrylate, t-butylacrylate, t-butylethylmethacrylate or 2-ethylhexylacrylate; vinyl aromates, e.g. styrene, methylstyrene or vinyltoluene; olefins, such as ethylene, propylene, 1,3-butadiene and isoprene; 1,3-dienes; and vinylhalogenides, e.g. vinylchloride further (co)polymerizable monomers, such as fumaric acid, maleic acid or its diethyl or diisopropylester

or its anhydride, ethylenically unsaturated sulfonic acids or their salts, such as vinyl sulfonic acid, 2-acrylamido-2-methyl-propane sulfonic acid, diallylphthalate, divinyl adipate, diallyl maleate, allylmethacrylate or triallylcyanurate, or crosslinking comonomers, such as acrylamidoglycolic acid, methylacrylamidoglycolic acid methyl ester, N-methylolacrylamide, N-methylolmethacrylamide, N-methylsolallylcarbamate, alkyl ethers such as the isobutoxyether or ester of N-methylolacrylamide or -methacrylamide, epoxy-functionalized such as glycidyl methacrylate or -acrylate, silicium functional comonomers, such as acryloxypropyltri(alkoxy)- or -methacryloxypropyltri(alkoxy) silanes, wherein alkoxy is e.g. methoxy, ethoxy or ethoxyethylen- or -propylenglycolethers, diacetone acrylamide and acetylacetoxyethylacrylate or -methacrylate; especially a co-polymerisate of two or more monomers selected from the group consisting of styrene, (meth)acrylic acid, C₁-C₇alkyl-(meth)acrylate, such as methyl or ethyl (meth)acrylate (preferred) and (meth)acrylamide.

3. The use according to claim 1 or claim 2 wherein the water glass is an aqueous lithium silicate or a mixture of alkali silicates including lithium silicate.
4. The use according to any one of claims 1 to 3 wherein the filler with gaseous inclusions comprising pores and/or capillaries wherein the filler is an aluminosilicate.
5. The use according to any one of claims 1 to 4 wherein the spreading composition is an aqueous

suspension of a polymer based on polycarboxyl ethers, or a mixture or two or more such polymers.

- 5 6. The use according to any one of claims 1 to 5, wherein the aqueous polymer dispersion is present in an amount of from 0.5 to 25 W-%, in a preferred variant from 1 to 20 W-%, calculated as dry polymer; the water glass is present in an amount of from 2 to 20 W-%, preferably from 3 to 10 W-%; 10 the filler with gaseous inclusions is present in an amount ranging from 1 to 10 W-%, preferably from 2 to 10 W-%; and the spreading composition is present in an amount ranging from 0.01 to 5 W-%, e.g. from 0.05 to 2 W-%, preferably from 0.1 to 1 W-%.
- 15
7. The use according claim 6, wherein the optional other additives are selected from water, a defoamer, a thickener, a biocide, a dispersion stabilizer, a dispersant, or two or more or especially all thereof; wherein preferably the 20 water is present in an amount from 1 to 50 W-%; the defoamer is present in an amount falling in the range from 0.05 to 5 W-%; the thickener is present in an amount falling in the range from 0.005 to 1 W-%, the biocide is present in an amount falling in the range from 0.01 to 2 W-%, 25 the dispersion stabilizer is present in an amount falling in the range from 0.05 to 5 W-%, and the dispersant is present in an amount falling in the range from 0.01 to 5 W-%; and optionally one or more further ingredients selected from fibers, accelerators, retardants, wetting 30 agents, solvents other than water, coloring agents, plasticizers, light- or UV-stabilizers or

mixtures of two or more thereof, which may be present in a total amount from 0.01 to 20 W-%.

- 5 8. The use according to any one of claims 1 to 7, comprising
as defoamer a defoamer based on an aqueous emulsion of a
polysiloxane copolymer with hydrophobic silica; as
thickener a modified cellulose; as biocide a microbiocide;
as dispersion stabilizer Carrageenan, Cellulose gum, diutan
10 gum, gellan gum, whey protein concentrate, pectin, locust
bean gum, xanthan gum or γ -polyglutamate, or a mixture of
two or more thereof; and as dispersant an anionic, cationic
and/or non-ionic detergent, especially salt modified
phosphonic acid.
- 15 9. The use according to any one of claims 1 to 8, wherein the
levelling compound is a floor levelling compound.
- 20 10. The use according claim 9, wherein the floor levelling
compound has a bond strength greater or equal to 0.8 N/mm^2
measured according to EN 13892-8 after 3 days of drying in
a climate chamber maintained at 20°C with 65% of relative
humidity, preferably to 1.0 N/mm^2 .
- 25 11. The use according to any one of claims 1 to 10, as
levelling coating on a subfloor, comprising applying it in
a thickness of up to 10 mm, e.g. up to 9, 8, 7, 6 or
especially 5 mm.
- 30 12. The use according to any one of claims 1 to 10, as
finishing coating for floors, wherein the levelling
compound comprises coloring and/or shine contributing
additives.