In addition to the pumpability of the wet formulation, the composition according to the invention meets a "sprayability" specification, that is, for example, that said wet formulation, when it is sprayed and applied in a layer approximately 5 cm thick, to a vertical substrate made from concrete blocks, holds on this vertical substrate, without creep or flow, for the time necessary for the hardening and bonding thereof in hardened form to the vertical substrate, at an ambient temperature of comprised for example between 5°C and 35°C and at a relative humidity RH comprised between 20 and 90 per cent.

Preferably, and still with a view to improving the wet application and pumping thereof in a sufficient time for it to be compatible with the requirements of construction, this composition is characterized, once mixed with a liquid - preferably water - with a water/A weight ratio comprised between 0.8 and 5, by a setting time, measured using a method **M1**, comprised between 1 and 24 hours, preferably between 1 and 8 hours.

According to another aspect thereof, the invention relates to a binder A comprising - in dry weight/weight % and in increasing order of preference-:

- -A1- primary binder: [5 – 95]; [10 – 85]; [15 – 75];
  of which:
  - lime: [10 – 95]; [20 – 70]; [30 – 60];
  - alumina source and/or calcium sulphate source: [0 – 90]; [5 – 30]; [7 – 15];
- -A2- water-retaining agent: [0.1 – 5]; [0.5 – 3]; [0.8 – 2];
- -A3- surfactant [0 – 2]; [0.01 – 1]; [0.05 – 0.5];
- -A4- secondary binder [0 – 85]; [5 – 50]; [7 – 15];
- -A5- lubricating mineral filler with a particle size d90 less than 100 µm: [0 – 40]; [0 – 30]; [0 – 20];
- -A6- mineral spacing filler with a particle size d90 greater than or equal to 100 µm: [0 – 40]; [0 – 35]; [0 – 30];
- -A7- water-repellent additive: [0 – 1.5]; [0 – 1]; [0 – 0.5];
- -A8- setting retarder additive: [0 –3]; [0 – 2]; [0 – 1];
- -A9- accelerating additive: [0 – 3]; [0 – 2]; [0 – 1];

  -A10- thickening additive: [0 – 2]; [0.1 – 1]; [0.2 – 0.8].

According to another aspect thereof, the invention relates to a kit comprising the binder (A) and one or more biosourced fillers (B), preferably of plant origin, of the dry composition according to the invention.

According to another aspect thereof, the invention relates to a wet mortar composition obtained, in particular from the composition according to the invention, pumpable in a screw pump with an air gap (E) between a rotor and a stator of between 4 and 30 mm, and preferably with a 2L6 or 2R6 jacket.

According to another aspect thereof, the invention relates to a hardened mortar obtained from the wet composition according to the invention as set out above.

CLAIMS

1 - Dry mortar composition, wet-sprayable in particular by means of a screw pump, enabling the production of an insulating mortar characterized in that:

(i). it comprises:

-A- at least one binder, itself comprising:

- -A1- at least one primary binder comprising lime and/or at least one alumina source and/or at least one calcium sulphate source, preferably at least one alumina source;
- -A2- at least one water-retaining agent;
- -A3- preferably at least one surfactant;

-B- at least one biosourced filler, preferably of plant origin;

the B/A ratio - the volume of dry filler -B- in litres/mass of dry binder -A- in kg - being comprised between - in increasing order of preference - 2 and 9; 2.5 and 8; 4 and 7.9; 4.6 and 7.5 L/kg;

(ii). it is intended to be mixed with a liquid - preferably water - with a water/A weight ratio comprised between 0.8 and 5, preferably between 1 and 4, and even more preferably between 1.5 and 3.5;

(iii). once mixed, it is pumpable in a screw pump as defined in a test **T1**.

2 - Composition according to claim 1, characterized, after mixing with a liquid, preferably water, in a water/A weight ratio comprised between 0.8 and 5, by a setting time, measured using a method **M1**, comprised between 1 and 24 hours, preferably 1 and 8 hours.

3 - Composition according to claim 1 or 2, characterized in that the primary binder A1 comprises lime and at least one alumina source.

4 - Composition according to any one of the preceding claims, characterized in that the alumina source is selected from the following types: geopolymer cements, slags, quick-setting cements, calcium aluminate cements (CAC), calcium sulphoaluminate (CAS) cements or mixtures of these species, used alone or in a mixture.

5 - Composition according to at least one of the preceding claims, characterized in that the water-retaining agent -A2- has a water retention greater than or equal to - in increasing order of preference - 50, 60, 70, 80, 90%, according to the retention measuring method **M2**, this water-retaining agent preferably being selected from the polysaccharides, and even more preferably from the group comprising - or even better constituted by - cellulose or starch ethers and mixtures thereof; methyl celluloses, hydroxypropyl celluloses, hydroxyethyl

celluloses, methyl hydroxypropyl celluloses, methyl hydroxyethyl celluloses and mixtures thereof; modified or unmodified guar ethers and mixtures thereof; or a mixture of these different species.

6 - Composition according to at least one of the preceding claims, characterized in that it comprises at least one secondary binder -A4- different from the binder -A1- and selected from Portland cements, quick-setting cements, slags, geopolymer cements, natural pozzolans, sodium silicates, potassium silicates, lithium silicates, organic binders or mixtures thereof.

7 - Composition according to at least one of the preceding claims, characterized in that the biosourced filler -B-, preferably of plant origin, is essentially composed of cellulose, hemicellulose and/or lignin, said filler preferably comprising

- at least one component, fibres, fibrils, dust, powder, chips -
- said component originating
  - from at least part of at least one plant raw material,
  - in at least one particulate form,
- this plant raw material preferably being selected from the group comprising, or even better constituted by - hemp, flax, cereal straw, oat, rice, canola seed, maize, sorghum, miscanthus, rice, sugar cane, sunflower, kenaf, coconut, olive stones, bamboo, wood or mixtures thereof.

8 - Binder -A- intended in particular for the composition according to at least one of claims 1 to 7, characterized in that it comprises - in dry weight/weight % and in increasing order of preference -:

- -A1- primary binder: [5 – 95]; [10 – 85]; [15 – 75];
  of which:
  - lime: [10 – 95]; [20 – 70]; [30 – 60];
  - alumina source and/or calcium sulphate source:
    [1 – 90]; [5 – 30]; [7 – 15];
- -A2- water-retaining agent: [0.1 – 5]; [0.5 – 3]; [0.8 – 2];
- -A3- surfactant: [0.01 – 1]; [0.05 – 0.5];
- -A4- secondary binder [0 – 85]; [5 – 50]; [7 – 15];
- -A5- lubricating mineral filler with a particle size d90 less than 100 µm: [0 – 40]; [0 – 30]; [0 – 20];
- -A6- mineral spacing filler with a particle size d90 greater than or equal to 100 µm: [0 – 40]; [0 – 35]; [0 – 30];
- -A7- water-repellent additive: [0 – 1.5]; [0 – 1]; [0 – 0.5];
- -A8- retarding additive: [0 –3]; [0 – 2]; [0 – 1];

- -A9- accelerating additive: [0 – 3]; [0 – 2]; [0 – 1];
- -A10- thickening additive: [0 – 2]; [0.1 – 1]; [0.2 – 0.8].

9 - Kit comprising the binder -A- according to claim 8 and the plant filler -B- as defined in particular in claim 1 or 7.

10 - Wet composition obtained from the composition according to at least one of claims 1 to 7, characterized in that it is pumpable in a machine fitted with a screw pump with an air gap (E) between a rotor (20) and a stator (18) of between 4 and 30 mm.

11- Hardened mortar obtained from the wet composition according to claim 10, characterized by a thermal conductivity λ less than or equal to - in W/m.K and in increasing order of preference - 0.15; 0.12; 0.1; 0,08; 0.07.

12 - External Thermal Insulation (ETI) or Internal Thermal Insulation (ITI) system comprising hardened mortar according to claim 11 and applied in layer(s) over a total thickness comprised between 2 and 30 cm, preferably between 5 and 15 cm, and coated with a waterproof render of a minimum thickness of 10 mm, characterized in that the hardened mortar comprises lime and at least one alumina source and in that said system passes the test for ETI in accordance with EOTA standard ETAG 004.

13 - Method for applying an insulating mortar comprising the following steps:

1. Preparing a mixture of liquid - preferably water - and the dry composition according to at least one of claims 1 to 7, that is, comprising the binder -A- and the filler of plant origin -B-, in the water/binder -A- weight ratio given below, on an increasing scale of preference:
   - [Water/A] ≥ 0.8; [Water/A] ≥ 1.0; [Water/A] ≥ 1.5;
   - 0.8 ≤ [Water/A] ≤ 5; 1 ≤ [Water/A] ≤ 4; 1, 5, 8 ≤ [Water/A] ≤ 3,5 ;
2. Preferably, pumping the mixture prepared in step 1 by means of a screw pump,

3.1 Spraying the mixture prepared in step 1
   → onto a vertical or inclined substrate,
   → to fill a timber- or metal-framed structure on site,
   → or to produce prefabricated walls;

or

3.2. Spraying and spreading the mixture on a horizontal surface to form a screed;

or

3.3. Pouring the mixture prepared in step 1 into formwork to produce a wall, to fill between two partitions, or into a mould to produce a prefabricated element, in particular blocks, pre-walls or panels.