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(54) Texturing material

(57) A texturing material suitable for building surfaces comprises a filler, for example a mineral filler such as whiting, together with pre-gelatinised cross-linked starch and gelatin. Preferably, the starch is in an amount from 0.2% to 5% by weight of the material, and the gelatin is in an amount of from 1.9% to 10% by weight. The material may also contain other binders such as cellulose ethers, and colourants, preservatives and wetting agents. Such texturing materials, after admixture of water, have good water retention, slip and pseudoplasticity properties.

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SPECIFICATION

Texturing material

The invention relates to texturing materials for use on the surfaces of building structures.

Texturing materials consist basically of a filler and an organic binder, and are required to have the following properties after admixture of water: water retention; slip, to facilitate spreading; and pseudoplasticity in order that it does not slump or reflow after application and before drying. In the past, these properties have been imparted to such materials by the addition of asbestos. However, in view of concern about health risks associated with asbestos, a suitable alternative has been desired. Various additives have been proposed for this purpose, such as cellulose ethers and starches, but all have provided materials which have been deficient in at least one of the desirable properties noted above.

US 4 287 103 of Georgia-Pacific Corporation discloses a joint filling material comprising a gelatinised starch and a filler, with a synthetic binder such as an emulsion of ethylene vinyl acetate copolymer. This material, whilst suitable for use as a filling material, is found to be quite unsuitable for texturing purposes.

It has now been found that these desirable properties can be achieved by incorporating in the material the combination of a pre-gelatinised cross-linked starch and a gelatin binder. Other binders such as cellulose ethers may be included, and additives such as colourants, preservatives and wetting agents may be used.

According to the invention there is provided a texturing material, for application to building or other surfaces after admixture of water, comprising a filler, a pre-gelatinised cross-linked starch, and gelatin.

Preferably, the pre-gelatinised cross-linked starch is added in an amount of from 0.2% to 5% by weight of material, depending on the type of starch used and the degree of cross-linking. The gelatine is preferably added in an amount of from 1.9% to 10% by weight of the material, and particularly preferably in an amount of from 2.7% to 4% by weight.

The following are examples of texturing compositions according to the invention. The compositions are to be mixed with water before use, in a conventional manner.

Example 1

	Parts per thousand by weight
Whiting	694.5
Calcium sulphate hemihydrate	192
Mica	75
Technical Gelatine	31
Pre-gelatinised cross-linked starch (Paselli P, Tunnel Avebe Ltd)	4.7
Methyl cellulose	1.8
Preservative	1

Example 2

	Parts per thousand by weight
Whiting	687
Calcium sulphate Hemihydrate	189.3
Mica	74
Technical Gelatine	31
Pre-gelatinised cross-linked starch (Snowflake 12615, CPC (UK) Ltd)	11.6
Sodium tripolyphosphate	3.7
Hydroxypropylmethylcellulose	1.8
Preservative	1.6

Example 3

	Parts per thousand by weight
Whiting	692
Calcium Sulphate Hemihydrate	190.4
Mica	75
Technical Gelatine	31
Sodium Tripolyphosphate	0.9
Pregelatinised Cross Linked starch (Snowflake 12615)	7.9
Methyl Cellulose	1.2
Preservative	1.6

Example 4

	Parts per thousand by weight
Whiting	693
Calcium Sulphate Hemihydrate	191
Mica	75
Technical Gelatine	31
Sodium Tripolyphosphate	0.9
Pregelatinised Cross Linked starch (Emjel 300)	6.4
Methyl Cellulose	1.1
Preservative	1.6

Example 5

	Parts per thousand by weight
Whiting	686
Calcium Sulphate Hemihydrate	189
Mica	74.3
Technical Gelatine	30.5
Sodium Tripolyphosphate	2.8
Pregelatinised Cross Linked starch (Emjel 200)	13.9
Methyl Cellulose	1.9
Preservative	1.6

Example 6

	Parts per thousand by weight
Whiting	695
Calcium Sulphate Hemihydrate	191
Mica	75
Technical Gelatine	31
Pregelatinised Cross Linked starch (Passeli P)	4.6
Ethyl Hydroxyethyl Cellulose	1.8
Preservative	1.6

Example 7

	Parts per thousand by weight
Whiting	695
Calcium Sulphate Hemihydrate	191
Mica	74.9
Technical Gelatine	30.9
Pregelatinised Cross Linked starch (Passeli P)	4.7
Sodium Carboxy Methyl Cellulose	1.9
Preservative	1.6

Example 8

	Parts per thousand by weight
Whiting	689
Calcium Sulphate Hemihydrate	190
Mica	74.4
Snowflake 12615 (pre-gelatinised cross linked starch)	14.9
Sodium Polyphosphate	1.7
Technical Gelatine	30

Example 9

	Parts per thousand by weight
Whiting	648
Calcium Sulphate Hemihydrate	178
Snowflake 12615	22.7
Sodium Polyphosphate	1.7
Technical Gelatine	79.6
Mica	70

Example 10

	Parts per thousand by weight
Whiting	687.4
Calcium Sulphate Hemihydrate	189.2
Mica	74.2
Sodium Polyphosphate	1.9
Snowflake 12615	14.8
Technical Gelatine	32.5

Example 11

	Parts per thousand by weight
Whiting	657.5
Calcium Sulphate Hemihydrate	181
Mica	71
Sodium Polyphosphate	1.8
Snowflake 12615	14.2
Technical Gelatine	74.5

Example 12

	Parts per thousand by weight
Whiting	670
Calcium Sulphate Hemihydrate	184.4
Mica	72.3
Sodium Polyphosphate	1.8
Snowflake 12615	16.3
Technical Gelatine	55.2

Example 13

	Parts per thousand by weight
Whiting	693
Calcium Sulphate Hemihydrate	191
Mica	74.8
Sodium Polyphosphate	1.9
Snowflake 12615	16.8
Technical Gelatine	22.5

Example 14

	Parts per thousand by weight
Whiting	666.4
Calcium Sulphate Hemihydrate	183.5
Mica	72
Sodium Polyphosphate	1.8
Snowflake 12615	16
Technical Gelatine	60.3

Example 15

	Parts per thousand by weight
Whiting	695
Calcium Sulphate Hemihydrate	191.4
Mica	75
Sodium Polyphosphate	1.9
Snowflake 12615	17
Technical Gelatine	19.7

The gelatine used in examples 1 to 7 has a gel strength of 120 bloomgrammes and viscosity of 39.5 millipoise; that used in examples 8 and 9 a gel strength of 71 bloomgrammes and a viscosity of 29.5 millipoise; that used in examples 10 and 11 a gel strength of 90 bloomgrammes and a viscosity of 33.5 millipoise; that used in examples 12 and 13 a gel strength of 155 bloomgrammes and a viscosity of 59 millipoise; and that used in examples 14 and 15 a gel strength of 195 bloomgrammes

and a viscosity of 71 millipoise. Gel strength measurements were carried out on a Bloom gelometer at 10°C, and viscosities were measured at 60°C.

The calcium sulphate hemihydrate used in the examples may be replaced by calcium sulphate dihydrate, with no effect on the properties of the texturing material. The whiting may be replaced by other carbonate fillers. For more rapid wetting out when the above materials are mixed with water, a powder wetting agent such as tripolyphosphate or sodium hexametaphosphate (Calgon) may be added.

Materials according to the invention are particularly suitable for texturing applications, but may also be used for jointing and filling purposes.

Claims

1. A texturing material, for application to building or other surfaces after admixture of water, comprising a filler, a pre-gelatinised cross-linked starch, and gelatin.

2. A texturing material according to claim 1 in which the gelatin is added in an amount of from 1.9% to 10% by weight of texturing material.

3. A texturing material according to claim 1 or 2, in which the gelatine is added in an amount of from 2.7% to 4% by weight of texturing material.

4. A texturing material according to claim 1, 2 or 3, in which the pre-gelatinised starch is added in an amount of from 0.2% to 5% by weight of texturing material.

5. A texturing material according to any previous claim further comprising a cellulose ether.

6. A texturing material according to any previous claim in which the filler is one or more of whiting, calcium sulphate hemihydrate, calcium sulphate dihydrate and mica.

7. A texturing material according to any previous claim further comprising one or more of colourants, preservatives and wetting agents.

8. A texturing material according to any of Examples 1 to 15.

New claims filed on 4 March 1983.
Superseded claims 1—8.

New or amended claims:—

1. A texturing material, for application to building or other surfaces after admixture of water, in the form of a dry mixture comprising a filler, a pre-gelatinised cross-linked starch, and gelatin.

2. A texturing material according to claim 1 in which the gelatin is present in an amount of from 1.9% to 10% by weight of texturing material.

3. A texturing material according to claim 1 or 2, in which the gelatine is present in an amount of from 2.7% to 4% by weight of texturing material.

4. A texturing material according to claim 1, 2 or 3, in which the pre-gelatinised starch is present in an amount of from 0.2% to 5% by weight of texturing material.

5. A texturing material according to any previous claim further comprising a cellulose ether.

6. A texturing material according to any previous claim in which the filler is one or more of whiting, calcium sulphate hemihydrate, calcium sulphate dihydrate and mica.

7. A texturing material according to any previous claim further comprising one or more of colourant, preservatives and wetting agents.

8. A texturing material according to any of Examples 1 to 15.

9. A method of providing a textured finish on a building or other surface comprising; providing a dry composition comprising a filler, a pre-gelatinised cross-linked starch and gelatin; admixing the dry composition with water to form a wet mix; and applying the wet mix to the building or other surface.

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