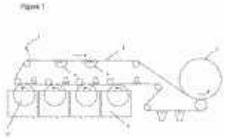
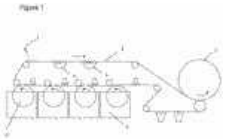
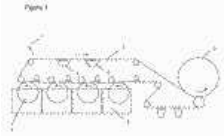
1105 results for ((FIBERCEMENT+ OR (FIBER 2W CEMENT+)) AND COAT+ AND PIGMENT? AND FILLER? AND BINDER?)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX - Collection: FAMPAT

#	Title	Publication number	1st app. date	Applicant/Assignee	1st publ. date	Publ. date
1.	Air-purifying **fiber** reinforced **cementitious** building material.	EP2275391	2009-07-16	REDCO*	2011-01-19	2011-01-19

The invention relates to a **fiber** reinforced **cementitious** building material with air-purification activity and to the use of said **fiber** reinforced **cementitious** building material for exterior wall cladding and roofing applications. The invention also provides a process for the manufacturing of said **fiber** reinforced **cementitious** building material.







#	Title	Publication number	1st app. date	Applicant/Assignee	1st publ. date	Publ. date
2.	Coloured **fiber cement** products and methods for the production therof	EP3112330	2015-06-29	ETEX SERVICES* ETEXYS SERVICE INDUSTRY PIZARRENO SOC PIZZARNO SOCIAL INDUSTRIES REDCO SOC INDUSTRIAL PIZARRENO* SOC INDUSTRY PIZARRENO SOCIEDAD INDUSTRIAL PIZARRENO	2017-01-04	2017-01-04

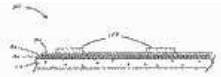
The present invention relates to coloured **fiber cement** products as well as to methods for manufacturing such products. In particular, the present invention provides coloured **fiber cement** products, which **fiber cement** products are coloured in the mass, and at least comprise on at least part of their outer surface one or more cured layers of a **coating** composition, which composition at least comprises a **binder** and a **pigment** and/or a **filler** and is characterized by a **pigment** volume concentration (PVC) of between about 1% and about 20%. The present invention further provides processes for producing these coloured **fiber cement** products. Finally, the present invention provides uses of the coloured **fiber cement** products as building materials. In particular embodiments, the **fiber cement** products produced by the processes of the present invention can be used to provide an outer surface to walls, both internal as well as external, a building or construction, e.g. as fagade plate, siding, etc.

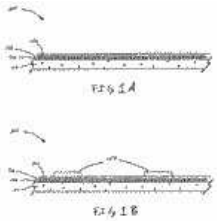
"Pigment volume concentration" (expressed in %) = "PVC" (expressed in %) = (Vp + Vf)/(Vp + Vf + Vb) * 100 (expressed in %),

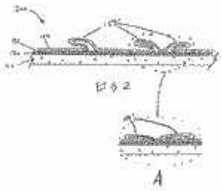
"Pigment volume concentration" (expressed in %) = "PVC" (expressed in %) = (Vp + Vf)/(Vp + Vf + Vb) * 100 (expressed in %),

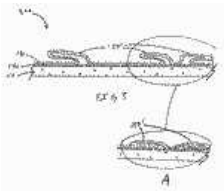
#	Title	Publication number	1st app. date	Applicant/Assignee	1st publ. date	Publ. date
3.	Packaging prefinished **fiber cement** products	WO2004007193	2003-07-16	JAMES HARDIE* JAMES HARDIE RESEARCH JAMES HARDY INTERNATIONAL FINANCE BETH ROTTEN FEN NOTE SHOP NETHERLANDS 1 0 7 7 ZETTE X AMSTERDAM STRAW SKYLARK 3 0 7 7 8 FLOOR ATRIUM	2004-01-22	2004-01-22

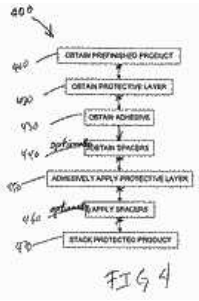
Protected prefinished **fiber cement** products are manufactured by applying a protective layer on the finished surface of a **fiber cement** product. The protective layer protects the finish layer of the prefinished **fiber cement** product during handling, storage, and transport. Removing the protective layer leaves no adhesive residue on the finish layer, does not damage the finish layer, and does not substantially tear the protective layer. Protected prefinished **fiber cement** products are typically stacked on pallets for storage and transport. Optionally, spacers may be placed between the stacked protected prefinished **fiber cement** products.

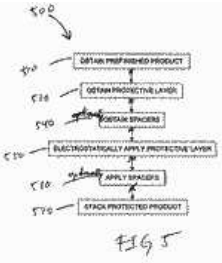


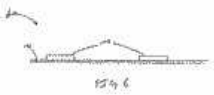


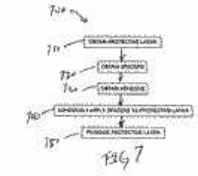






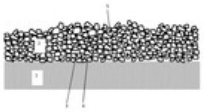


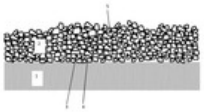


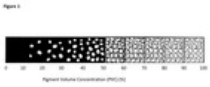


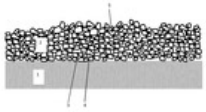
4.	Ink-jet printing on **fiber cement** products	UY36560	2015-03-13	ETERNIT* ETNIT	2016-04-29	2016-04-29

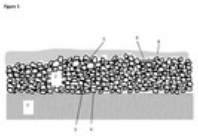
The present invention relates to processes for producing **fiber cement** products as well as to the **fiber cement** products obtainable therewith. More specifically, the present invention relates to **fiber cement** products that are suitable for being subjected to ink-jet printing, which **fiber cement** products at least comprise on their outer surface one or more cured layers of a first **coating** composition, which at least comprises a **binder** and a **pigment** and which is characterized by a **pigment** volume concentration of higher than about 40%. The invention further provides processes for producing such **fiber cement** products. Moreover, the present invention provides processes for producing ink-jet printed **fiber cement** products and ink-jet printed **fiber cement** products obtainable therewith. The present invention further relates to various uses of these **fiber cement** products, in particular as building materials.









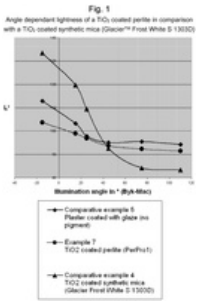


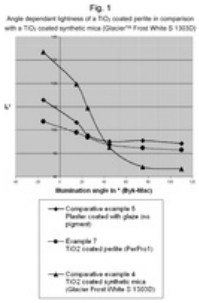
5.	Silicate-bound materials such as **coating**, molding, adhesive and **filler** material, **binders** and methods for their production	WO200073237	1999-06-02	DEUTSCHE AMPHIBOLIN WERKE VON ROBERT MURJAHN*	2000-12-07	2000-12-07

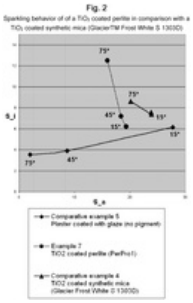
The invention relates to silicate-bound materials, especially **coating**, molding, adhesive and **filler** material that contains a silicate **binder** and optionally **fillers** and/or **pigments** and/or additives. The silicate **binders** contain water-soluble silicate, silicic acid and one or more water-soluble organic nitrogen compounds as the stabilizer.

6.	Use of perlite based effect **pigments** for finishes with antique, or patina appearance	WO2012013663	2011-07-26	BASF*	2012-02-02	2012-02-02

The present invention provides a process for imparting a simulated patina, or antique appearance to a substrate by using a **coating** composition comprising a perlite based effect **pigment**. The perlite based effect **pigment** functions as colorant and matting agent and shows an almost angle independent brightness. The process provides, for example, decorative wall **coatings** showing enhanced antique, or patina effects as compared to conventional effect **pigments** on basis of mica.







7. Methods for producing **fiber cement** products with **fiber cement** waste | EP3305739 | 2016-10-06 | ETEX SERVICES* | 2018-04-11 | 2018-04-11

The present invention relates to methods for the production of fresh cured **fiber cement** products. More particularly, the present invention provides methods for the production of fresh **fiber cement** products comprising cured **fiber cement** waste material, at least comprising the steps of: (a) Providing a cured **fiber cement** waste powder by comminuting cured **fiber cement** waste material; (b) Providing an aqueous **fiber cement** slurry comprising water, **cementitious binder**, natural or synthetic fibers and said cured **fiber cement** waste powder; (c) Forming a green **fiber cement** sheet from said aqueous **fiber cement** slurry; and (d) Autoclave-curing said green **fiber cement** sheet thereby providing a fresh **fiber cement** product.

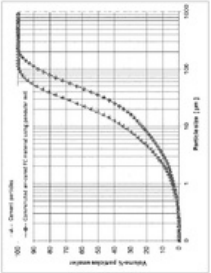


FIG. 1

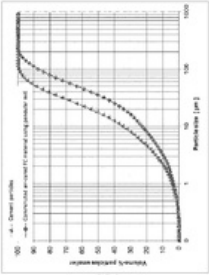


FIG. 1

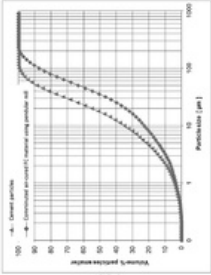


FIG. 1

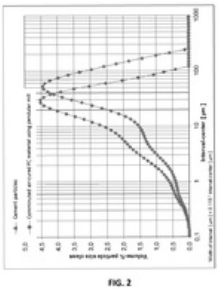


FIG. 2

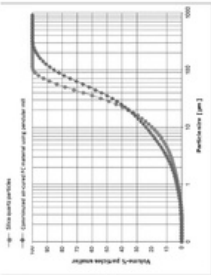


FIG. 3

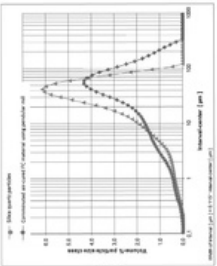


FIG. 4

FIG. 5

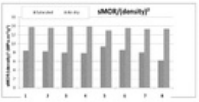


FIG. 6

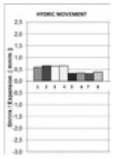


FIG. 7

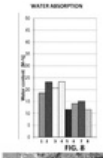


FIG. 8

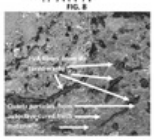
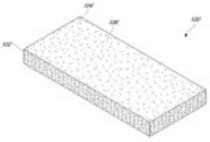
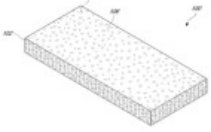


FIG. 9

8. Aerated **fiber cement** building products and methods of making the same | CA2830525 | 2012-04-27 | JAMES HARDIE* JAMES HARDY TECHNOLOGY JAMES HARDIE TECHNOLOGY | 2012-11-01 | 2012-11-01

Disclosed herein are low density **fiber cement** articles, such as **fiber cement** building panels and sheets, comprised of multiple overlaying **fiber cement** substrate layers having small and uniform entrained air pockets distributed throughout. Also disclosed herein are air entrainment systems and methods for manufacturing aerated low density **fiber cement** panels or sheets with consistent air void content and uniform air void distribution. Also disclosed herein are air entrainment technologies adapted to work in conjunction with the Hatschek process to produce aerated **fiber cement** articles having controlled air void content and distribution.





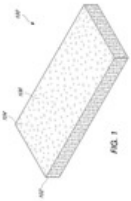


FIG. 1

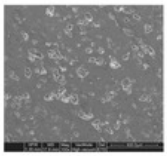


FIG. 2

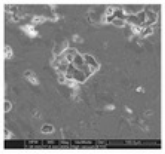


FIG. 3

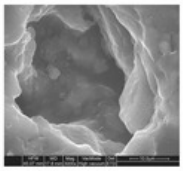


FIG. 4

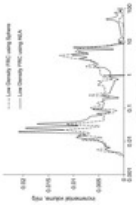


FIG. 5

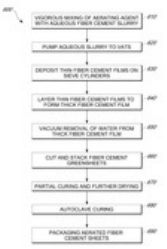


FIG. 6

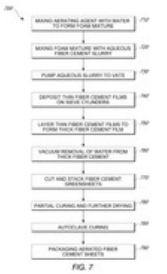


FIG. 7

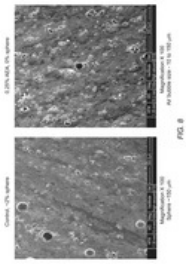


FIG. 8

9.	Method for comminuting cured **fiber cement** material and method for the production of **fiber cement** product comprising recycled cured **fiber cement** powder	EP3305738	2016-10-06	ETEX SERVICES*	2018-04-11	2018-04-11

The present invention relates to **fiber cement** products. More specifically, the present invention relates to methods for the production of comminuted **fiber cement** material starting from cured **fiber cement** products by using a pendular mill. In addition, the present invention relates to the further use of the produced comminuted **fiber cement** material for the production of fresh **fiber cement** products comprising the comminuted cured **fiber cement** material.

FIG. 1

FIG. 1

FIG. 1

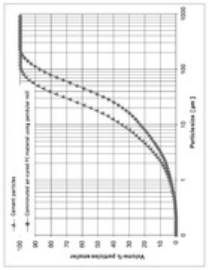


FIG. 2

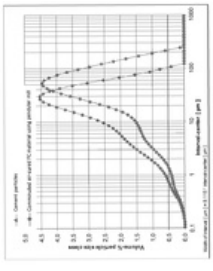


FIG. 3

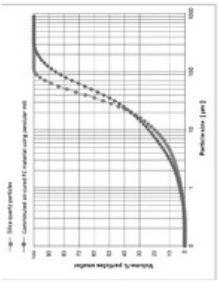


FIG. 4

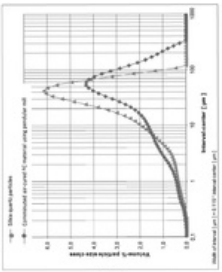


FIG. 5

FIG. 6

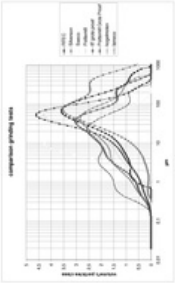


FIG. 7

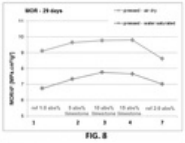


FIG. 8

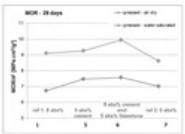


FIG. 9

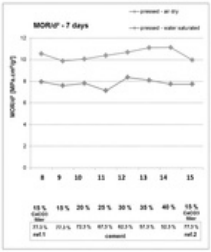
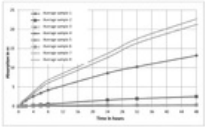
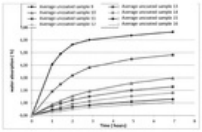


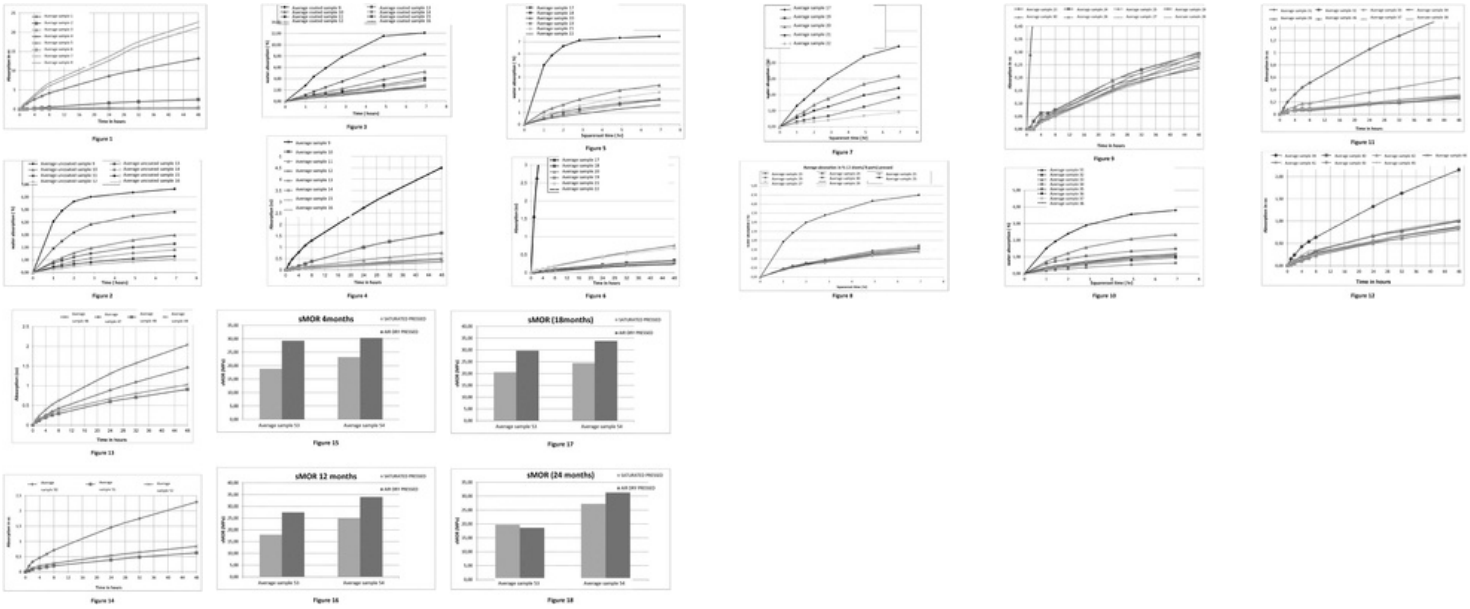
FIG. 10

10. Hydrophobized **fiber cement** products, methods for production and uses thereof | EP3315474 | 2016-10-28 | ETEX SERVICES* | 2018-05-02 | 2018-05-02

The present invention relates hydrophobized **fiber cement** products and methods for the production thereof as well as uses of such products, in particular in the building industry. In particular, the present invention provides hydrophobized **fiber cement** product, comprising a **fiber cementitious** matrix and a hydrophobizing agent uniformly dispersed therein, wherein said hydrophobizing agent comprises at least one hydrophobic silicone resin. The present invention further provides porcesses for producing a hydrophobized **fiber cement** product with enhanced water impermeability, wherein said process comprises at least the steps of: a) admixing an inorganic curable **cementitious** matrix with a hydrophobizing agent to form a curable mixture, wherein said hydrophobizing agent comprises at least one hydrophobic silicone resin, b) transforming the curable mixture into a shaped body; and c) curing the curable mixture to form a uniformly hydrophobized **fiber cement** product.

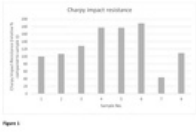


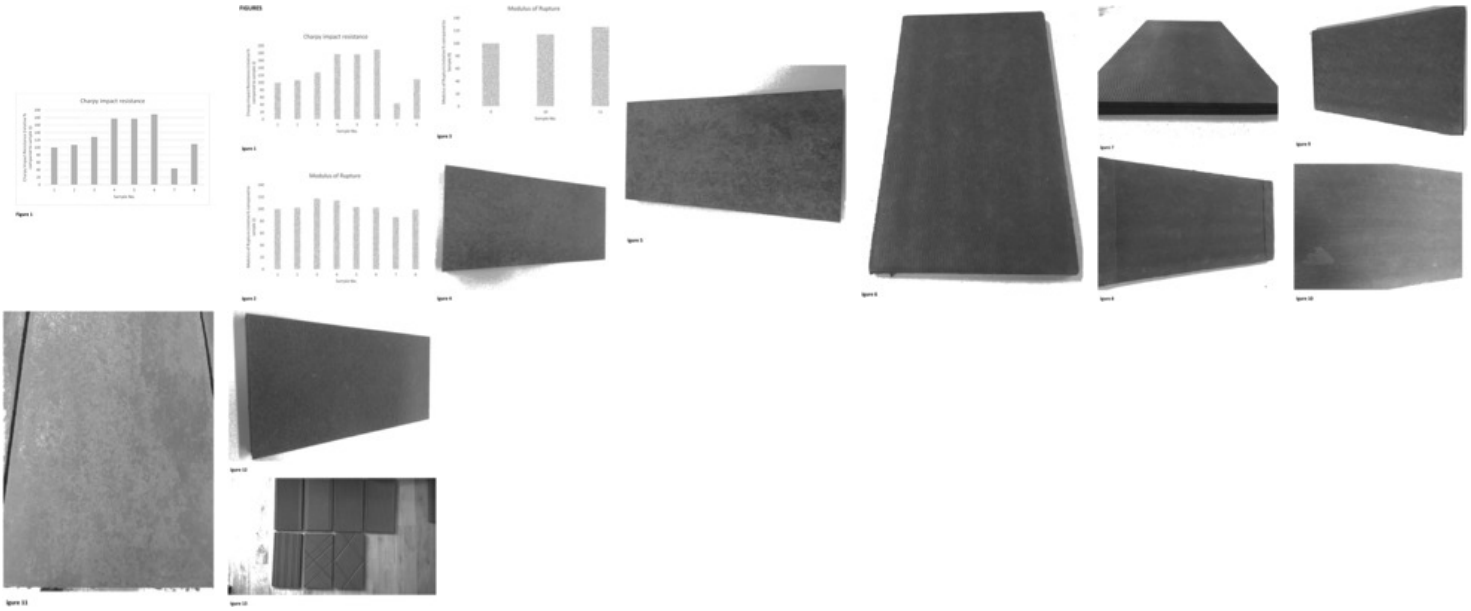




11. **Fiber cement** flooring products and methods for the production thereof | WO2018138273 | 2018-01-26 | ETERNIT* ETEX SERVICES* | 2018-08-02 | 2018-08-02

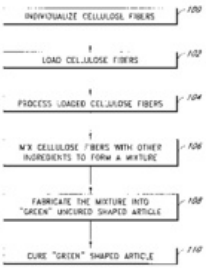
The present invention relates to **fiber cement** flooring products. In particular, the present invention provides **fiber cement** flooring products, at least comprising **cement** and fibers, characterized in that these **fiber cement** flooring products comprise amorphous silica in an amount of between about 2 weight % and about 15 weight % compared to the total dry weight of the **fiber cement** composition of said **fiber cement** flooring product. The present invention further relates to methods for the production of such **fiber cement** flooring products as well as uses of such **fiber cement** flooring products in the building industry. The present invention further relates to **fiber cement** formulations and **fiber cement** materials, which are suitable for the production of **fiber cement** products for flooring applications.





12.	**Fiber cement** composite materials using cellulose fibers loaded with inorganic and/or organic substances	WO200228796	2001-09-21	JAMES HADI RESEARCH JAMES HARDIE* JAMES HARDIE RESEARCH	2002-04-11	2002-04-11

This invention discloses a new technology related to cellulose **fiber** reinforced **cement** composite materials using the loaded cellulose fibers. This invention discloses four aspects of the technology: **fiber** treatment; formulation; method and final product. This technology advantageously provides **fiber cement** building materials with the desirable characteristics of reduced water absorption, reduced rate of water absorption, lower water migration, and lower water permeability. This invention also impart the final products improved freeze-thaw resistance, reduced efflorescence, reduced chemical dissolution and re-deposition, and improved rot and fire resistances, compared to conventional **fiber cement** products. These improved attributes are gained without loss in dimensional stability, strength, strain or toughness.



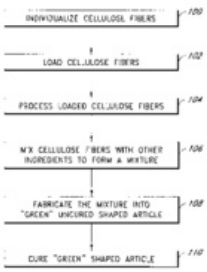


FIG. 1

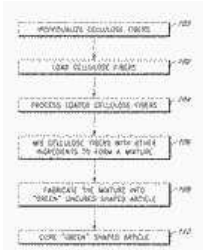


FIG. 2

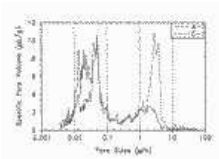


FIG. 3A

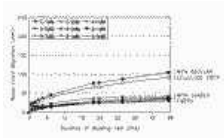


FIG. 3B

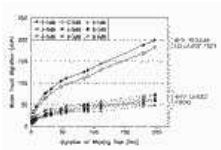


FIG. 4A

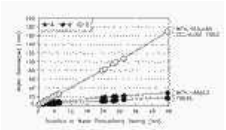


FIG. 4B

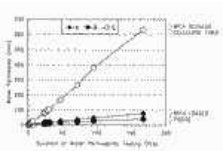


FIG. 5A

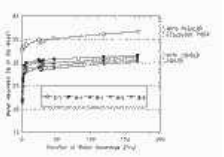
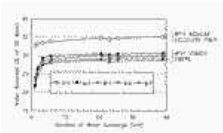
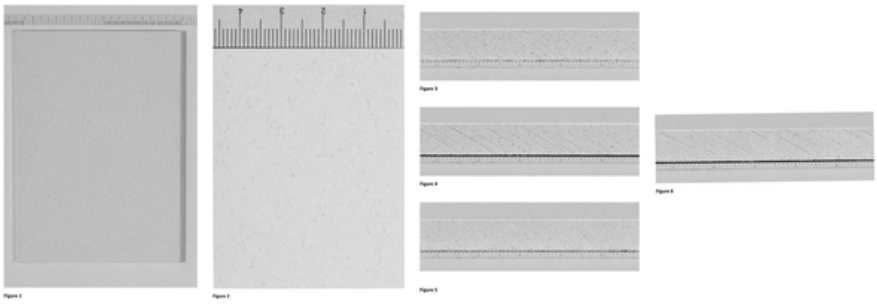


FIG. 5B



13.	Pale-colored **fiber cement** products and methods for the production thereof	EP3381884	2017-03-28	COMPTOIR DU BATIMENT* ETEX SERVICES*	2018-10-03	2018-10-03

The present invention relates to pale-colored **fiber cement** products at least comprising white **cement** and synthetic fibers, wherein the synthetic fibers are pigmented with at least one dark **pigment** chosen from the group consisting of a black **pigment**, a brown **pigment**, a blue **pigment**, a red **pigment**, a green **pigment** and a gray **pigment**. The present invention further relates to methods for the production of these pale-colored **fiber cement** products as well as to uses thereof in the building industry.



14. Methods for producing air-cured **fiber cement** products EP3305742 2016-10-06 ETEX SERVICES* 2018-04-11 2018-04-11

METHODS FOR PRODUCING AIR-CURED **FIBER CEMENT** PRODUCTS The present invention relates to methods for the production of air-cured **fiber cement** products. More particularly, the present invention provides methods for the production of air-cured **fiber cement** products, at least comprising the steps of: (a) Providing cured **fiber cement** powder by comminuting cured **fiber cement** material; (b) Providing an aqueous **fiber cement** slurry comprising water, **cementitious binder**, natural or synthetic fibers and between about 5M% and about 40M% of said cured **fiber cement** powder; (c) Providing a green **fiber cement** sheet; and (d) Air-curing said green **fiber cement** sheet thereby providing an air-cured **fiber cement** product.

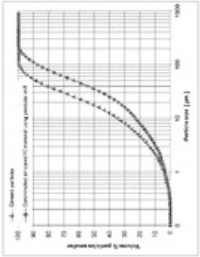


FIG. 1

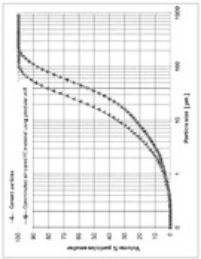


FIG. 1

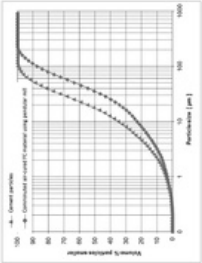


FIG. 1

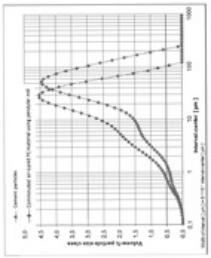


FIG. 2

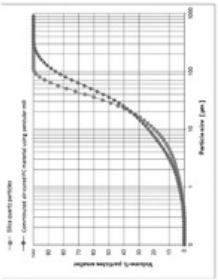


FIG. 3

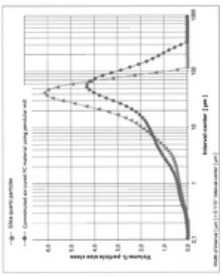


FIG. 4

FIG. 5

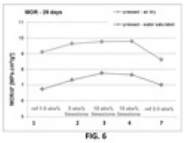


FIG. 6

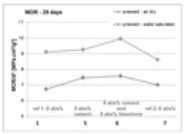


FIG. 7

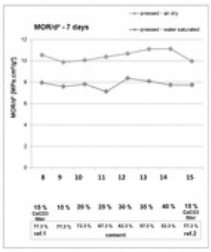


FIG. 8

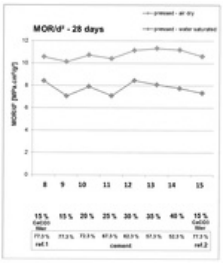


FIG. 9

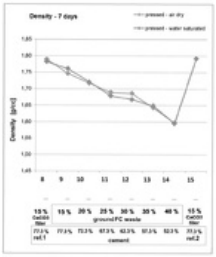
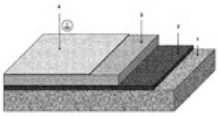
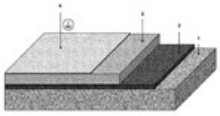


FIG. 10

15. Epoxy resin-**coated cement-bound** composition for electrically conductive **coatings** or seal **coats** WO2016113250 2016-01-12 SIKA TECHNOLOGY* 2016-07-21 2016-07-21

A multicomponent composition is described, comprising A) a **binder** component (A) comprising at least one epoxy resin, B) an aqueous hardener component (B) comprising at least one amine compound as an amine hardener and water, and C) a solid component (C) comprising at least one hydraulic inorganic **binder**, preferably **cement**, the multicomponent composition containing, relative to the total weight, at least 8% by weight of an organic **binder**, the total amount of epoxy resin and amine hardener constituting the organic **binder**, and at least one organic salt. The multicomponent composition preferably comprises at least one **pigment** as the colorant. The multicomponent composition can be used to produce conductive floor **coatings** or floor seal **coats** suitable for ESD floor **coatings**. The **coatings** or seal **coats** can be produced in a large number of color hues.





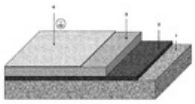


Figure 1

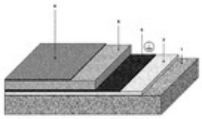
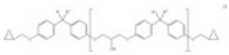


Figure 2



16.	Methods for producing air-cured **fiber cement** sheets	EP3305741	2016-10-06	ETEX SERVICES*	2018-04-11	2018-04-11

The present invention relates to methods for the production of air-cured **fiber cement** products. More particularly, the present invention provides methods for the production of air-cured **fiber cement** products, at least comprising the steps of: (a) Providing cured **fiber cement** powder by comminuting cured **fiber cement** material; (b) Providing an aqueous **fiber cement** slurry comprising water, **cementitious binder**, natural or synthetic fibers and said cured **fiber cement** powder; (c) Providing a green **fiber cement** sheet; (d) Pressing said green **fiber cement** sheet; and (e) Air-curing said compressed **fiber cement** sheet thereby providing an air-cured **fiber cement** product.

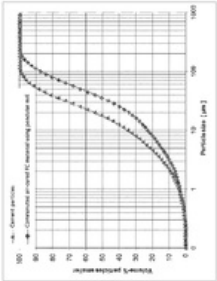


FIG. 1

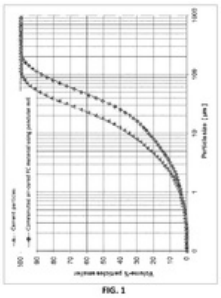


FIG. 1

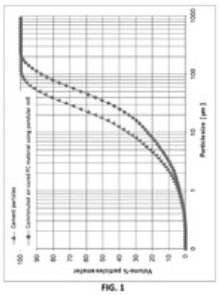


FIG. 1

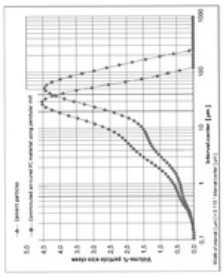


FIG. 2

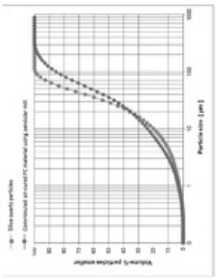


FIG. 3

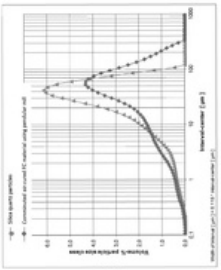


FIG. 4

FIG. 5

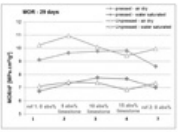


FIG. 6

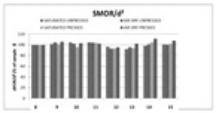


FIG. 8

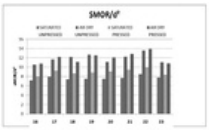


FIG. 10

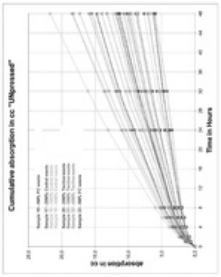


FIG. 12

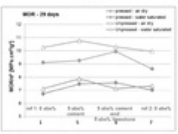


FIG. 7

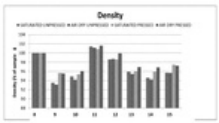


FIG. 9

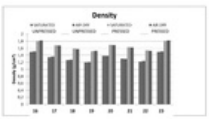
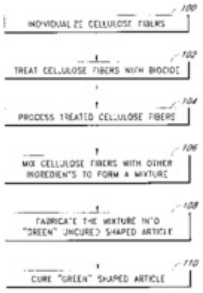


FIG. 11

17.	Building materials with bioresistant properties	WO200232830	2001-09-25	HEWLETT PACKARD DEVELOPMENT JAMES HADI RESEARCH JAMES HARDIE* JAMES HARDIE RESEARCH LIGHTER JAMES EDWARD JR	2002-04-25	2002-04-25

A building article incorporating a biocidal agent, such as copper oxine, that inhibits the growth of mold, fungi, algae, mildew, bacteria, lichen, and other undesirable biological growth is provided. The biocidal agent can be a biocide, fungicide, germicide, insecticide, mildewcide, or the like. The biocidal agent can be interspersed throughout the matrix of the article; applied as a surface treatment to the article; or applied as a treatment to the fibers reinforcing the article. The building article can include tile backer boards, decks, soffits, trims, decking, fencing, roofing, cladding, sheathing, and other products. The building article can also include a variety of different composite materials such as **cement**, gypsum, wood, and wood/polymer composites.



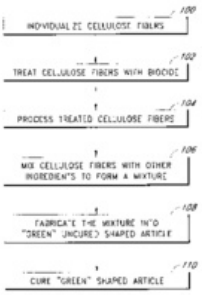


FIG. 1

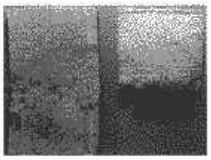
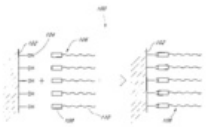
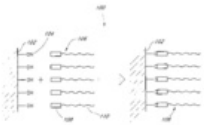


FIG. 2

18.	**Fiber cement** composite materials using sized cellulose fibers	WO200228795	2001-09-21	JAMES HARDIE* JAMES HARDIE RESEARCH JAMES HARDY RESEARCH PITIE WAI	2002-04-11	2002-04-11

This invention discloses a new technology related to cellulose **fiber** reinforced **cement** composite materials using cellulose fibers that are treated with inorganic and/or organic resins to make the fibers more hydrophobic, as well as other chemical treatments. This invention discloses four aspects of the technology: **fiber** treatment, formulations, methods and the final product. This technology advantageously provides **fiber cement** building materials with the desirable characteristics of reduced water absorption, reduced rate of water absorption, lower water migration, and lower water permeability. This invention also impart the final products improved freeze-thaw resistance, reduced efflorescence, and improved rot and UV resistances, compared to conventional **fiber cement** products. These improved attributes are gained without loss in dimensional stability, strength, strain or toughness. In some cases the physical and mechanical properties are improved. This invention also discloses the method of treating cellulose fibers with various chemicals to impart the **fiber** hydrophobicity for applications in the **fiber** reinforced **cement** composite materials.





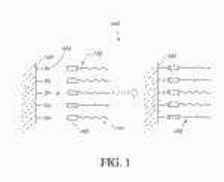


FIG. 1

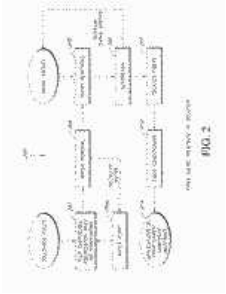


FIG. 2

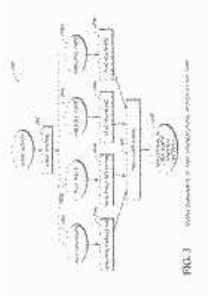


FIG. 3

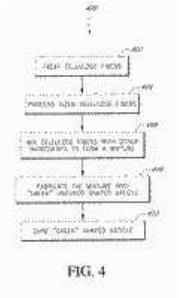


FIG. 4

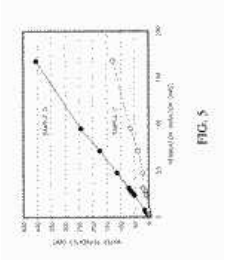


FIG. 5

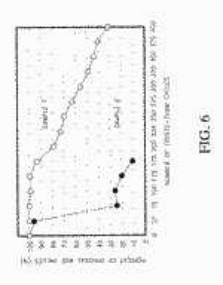


FIG. 6

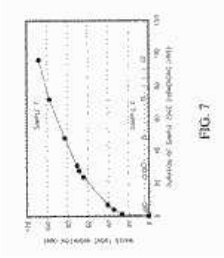


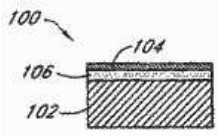
FIG. 7

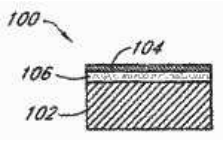
19.	**Coated fiber cement** products and methods for the production thereof	EP3336067	2016-12-19	ETERNIT*	2018-06-20	2018-06-20

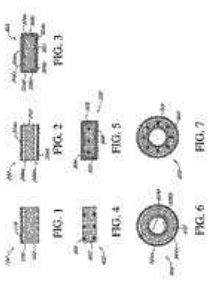
The present invention relates to **coated fiber cement** products as well as to methods for manufacturing such products. In particular, the present invention provides processes for manufacturing **coated fiber cement** products, these processes comprising the steps of: (i) providing a cured **fiber cement** product having at least one surface; (ii) applying a primer to the at least one surface of the cured **fiber cement** product; (iii) providing at least one layer of a radiation curable composition to the at least one surface, which radiation curable composition comprises at least one **pigment**; and (iv) curing the layer of radiation curable composition by radiation. Finally, the present invention provides **coated fiber cement** products obtainable by such processes and uses of these **fiber cement** products as building materials. In particular embodiments, the **coated fiber cement** products produced by the processes of the present invention can be used to provide an outer surface to walls, both internal as well as external, a building or construction, e.g. as façade plate, siding, roofing element, etc. such as for instance a slate.

20.	Composite **fiber cement** article with radiation curable component	WO2005071179	2005-01-12	JAMES HARDIE* JAMES HARDIE RESEARCH JAMES HARDY INTERNATIONAL FINANCE BETH ROTTEN FEN NOTE SHOP	2005-08-04	2005-08-04

A composite building article is configured with one or more subsurface interfacial zones provided to improve the durability of the article. Each subsurface interfacial zone is made of a matrix of **fiber cement** and radiation curable material. The radiation curable material forms an interlocking network with the **fiber cement** to provide a interfacial zone against ingress of environmental agents that can degrade the article. The number, configuration and distribution of the subsurface interfacial zones can vary dependent on the desired characteristics of the final product. The subsurface interfacial zones also improves the adhesion between exterior **coatings** and the substrate as the interfacial zones can be integrally formed with the substrate as well as exterior **coating** layer.







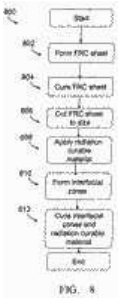


FIG. 8

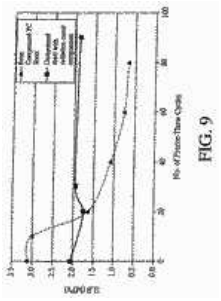


FIG. 9

FIG. 10A

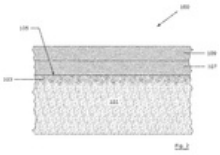
FIG. 10B

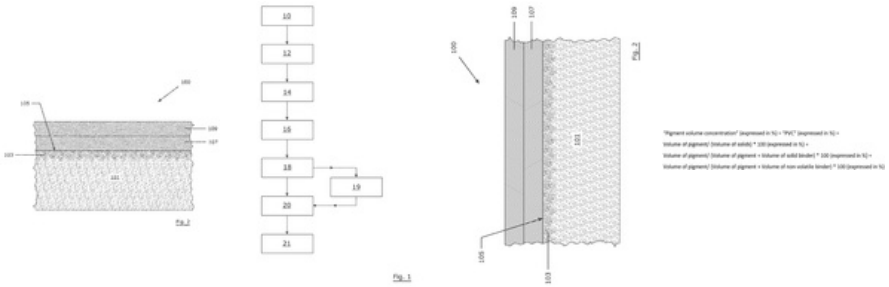
21.	Decorative, coloured and wear resistant **coat** for floors and panels based on epoxy resins, and method for its preparation	EP0296976	1987-06-26	BITUMASTIC BITUMASTIC STE FSE SOCIETE FRANCAISE BITUMASTIC* SOCIETE FRANCAISE BITUMASTIC RUE DES PATIS 76140 PETIT QUEVILLY FRANCE	1988-12-28	1988-12-28

The **coating** consists of a homogeneous mixture of solvent-free epoxide resin containing the usual additives, solid ballotini and aluminium flakes coloured with **pigments**, this **coating** being thus pigmented in the bulk, translucent and scintillating in a durable manner. The colorant for the flakes is advantageously a coloured and iridescent epoxy varnish. The **coating** can be applied in a single run, it being possible for the single **coat** to have a thickness of 1 to 5 millimetres. It is produced by spreading a homogeneous mixture of its various components, used in premetered quantities, on a primer which has been applied beforehand to the substrate to be **coated**.

22. **Coated fiber cement** products and methods for the production thereof | EP3106448 | 2015-06-15 | ETERNIT* | 2016-12-21 | 2016-12-21

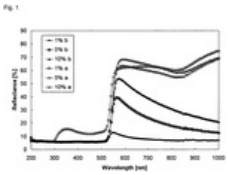
The present invention relates to **coated fiber cement** products as well as to methods for manufacturing such products. In particular, the present invention provides processes for manufacturing **coated fiber cement** products, these processes comprising the steps of: (i) providing a cured **fiber cement** product having at least one surface; (ii) optionally applying a primer to the at least one surface of the cured **fiber cement** product; (iii) providing a first layer of a first radiation curable composition to the at least one surface; (iv) partially curing the first layer of radiation curable composition by radiation; (v) providing a second layer of a second radiation curable composition to the partially cured first layer, the second radiation curable composition comprising **pigments**; and (vi) curing the first and the second layer of radiation curable composition by radiation. Finally, the present invention provides **coated fiber cement** products obtainable by such processes and uses of these **fiber cement** products as building materials. In particular embodiments, the **coated fiber cement** products produced by the processes of the present invention can be used to provide an outer surface to walls, both internal as well as external, a building or construction, e.g. as façade plate, siding, etc.

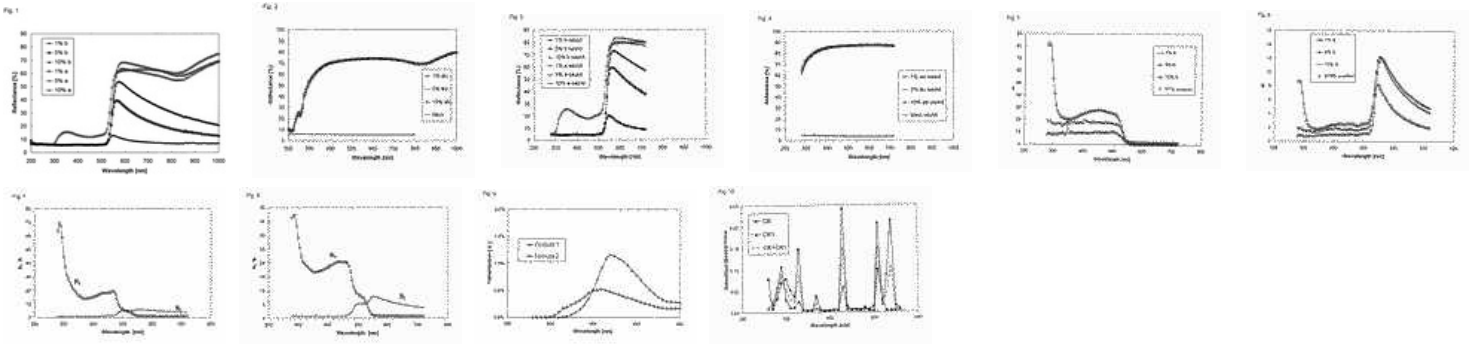




23. Radiation-curing method for **coatings** | WO2005119208 | 2004-05-26 | BASF* | 2005-12-15 | 2005-12-15

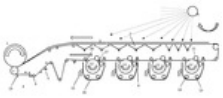
The invention relates to a method for determining the minimum requirements that are necessary for the radiation-curing of pigmented, radiation-curable **coating** substances. The invention also relates to a device and to a commercial method for radiation curing.

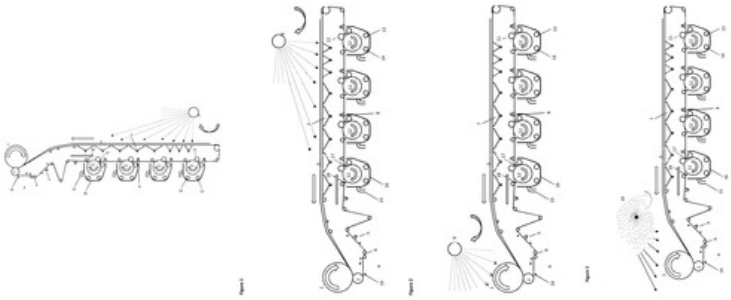




24. Process and apparatus for making a hydrophobized **fiber cement** product | EP3067176 | 2015-03-09 | ETERNIT* | 2016-09-14 | 2016-09-14

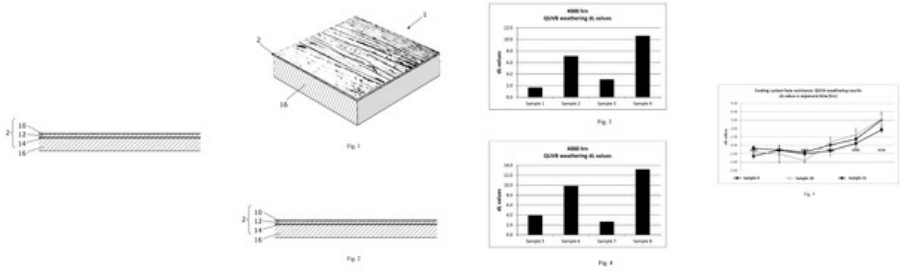
The present invention relates to processes and apparatuses for producing hydrophobized **fiber cement** sheets as well as **fiber cement** sheets obtainable therewith. In particular, the present invention provides processes for manufacturing a hydrophobized **fiber cement** product, said process at least comprising the steps of: (i) forming at least one **fiber cement** film on a rotating sieve in contact with a **fiber cement** slurry in a vat; (ii) transferring said at least one **fiber cement** film from said sieve to a felt transport belt, (iii) applying a mist of a hydrophobizing agent to said at least one **fiber cement** film, and (iv) accumulating the **fiber cement** film on an accumulator roll via the felt transport belt, so as to form a hydrophobized **fiber cement** product. The present invention further relates to various uses of the **fiber cement** sheets obtainable by the processes of the invention in the building industry.





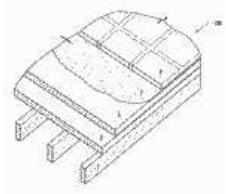
25. **Coating** system for **fiber cement** articles | CA2941570 | 2016-09-13 | JAMES HARDIE* | 2017-03-14 | 2017-03-14

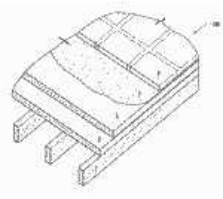
A **coating** system which provides a stain finish on a **fiber cement** building article. The **coating** system comprising a sealing agent, a basecoat and a topcoat, wherein the **coating** system is disposed on at least one surface of the **fiber cement** building article whereby the sealing agent is disposed adjacent to the at least one surface of the **fiber cement** building article, the basecoat is disposed on the sealing agent remote from the surface of the **fiber cement** building article and the topcoat is disposed on the basecoat remote from the **fiber cement** building article.

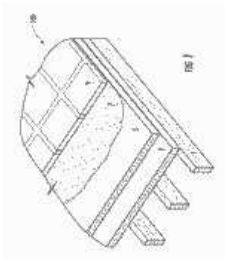


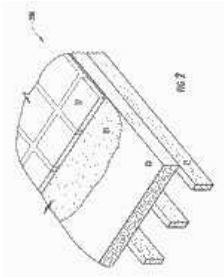
26. Structural **fiber cement** building materials US20090162602 2007-12-20 GLEESON JAMES ALBERT JAMES HARDIE* 2009-06-25 2009-06-25

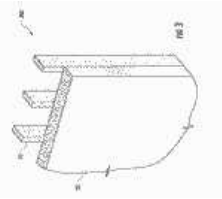
A structural **fiber cement** sheet containing **cementitious** matrix and reinforcing cellulose fibers distributed throughout the matrix having a dry density less than 1.25 g/cm3, a thickness less than 0.7500 in, and able to withstand uniform loads of 200 psf or greater according to test method of Section 6.4.2.4 of PS2 and with a deflection of less than 0.067 inches at 60 psf when spaced on a span of 24 inches or less on center.

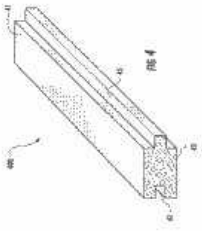


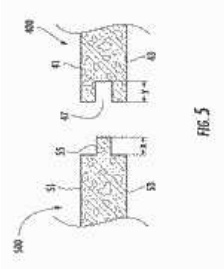


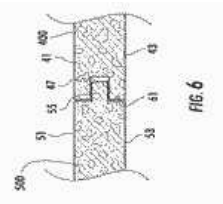


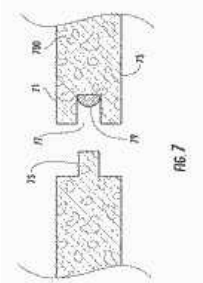






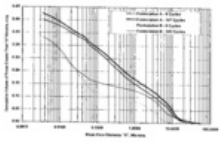


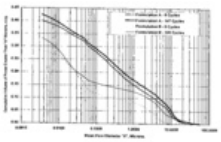


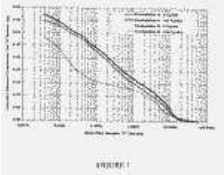


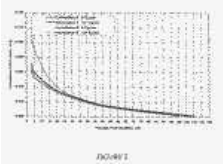
27. **Fiber cement** building materials with low density additives WO200168547 2001-03-09 JAMES HADI RESEARCH JAMES HARDIE* JAMES HARDIE RESEARCH 2001-09-20 2001-09-20

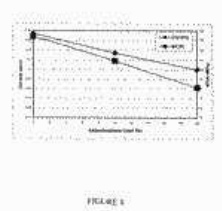
This invention relates to a formulation with the addition of hollow ceramic microspheres into **cementitious** cellulose **fiber** reinforced building materials. This formulation is advantageously lightweight or low density compared as compared to current **fiber cement** products without the increased moisture expansion and freeze-thaw degradation usually associated with the addition of lightweight inorganic materials to **fiber cement** mixes. The low density additive also give the material improved thermal dimensional stability.







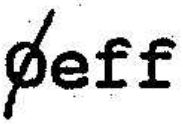


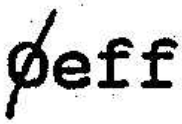


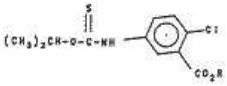
$$\frac{\text{Length}_{\text{initial}} - \text{Length}_{\text{final}}}{\text{Length}_{\text{final}}} \times 100.$$

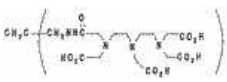
28. Structural aggregate **pigments** CA2067141 1990-03-28 INDUSTRIAL PROGRESS* 1991-04-13 1991-04-13

Structural aggregate **pigment** products with intrinsically built-in functional properties comprising particulate matter treated with complex functional microgels.

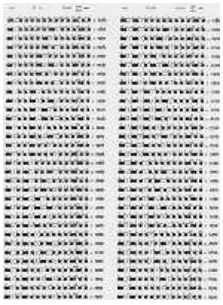






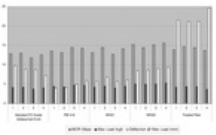


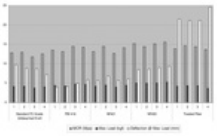
```
      pr = .45;
if (wt == 3)
      pr = .65;
if (wt == 4)
      pr = .85;
if (wt == 5)
      pr = 1.05;
if (wt == 6)
      pr = 1.25;
if (wt == 7)
      pr = 1.45;
if (wt == 8)
      pr = 1.65;
if (wt == 9)
      pr = 1.85;
if (wt == 10)
      pr = 2.05;
if (wt == 11)
      pr = 2.25;
```



29. **Fiber cement** board with modified **fiber** CN101898882 2009-05-29 INTERNATIONAL PAPER* WEYERHAEUSER 2010-12-01 2010-12-01

A building material product comprising a **cementitious binder**, an aggregate and cellulose reinforcing fibers wherein the cellulose reinforcing fibers have been treated with oil which is bound to the **fiber** by a retention aid. The resulting **fiber** when included in a **fiber cement** composite results in improved deflection of the composite at peak loading as well as improved impact strength while maintaining overall board strength.





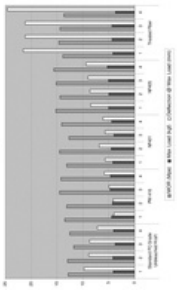


Fig. 2

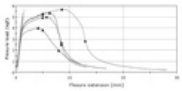
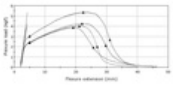
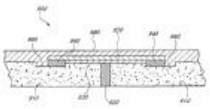


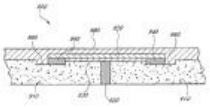
Fig. 3



30. Adhesive-edge building panel and method of manufacture WO03046301 2002-11-25 JAMES HARDIE* JAMES HARDIE RESEARCH JAMES HARDY RESEARCH PITIE WAI 2003-06-05 2003-06-05

Disclosed herein is an adhesive-edge building panel used in the fabrication of panelized wall systems with elastomeric joints that are resistant to cracking. The panels are preferably **fiber cement**. An adhesive is preapplied adjacent to an edge of the panel and laminated to a release liner. Panels are fastened to a frame with the adhesive-edges adjacent to each other. A backing material is applied to the seam between the panels such that the edges of the joint tape adhere to the adhesive-edges of the adjacent panels. The wall is then finished with an elastomeric finish. Also disclosed is a method of manufacturing the adhesive-edge panels.





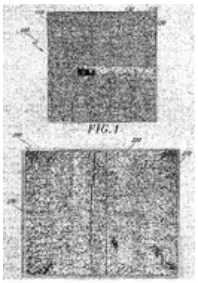


FIG.1

FIG.2

FIG.3

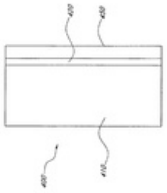


FIG.4

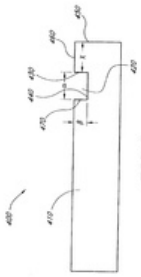


FIG.5

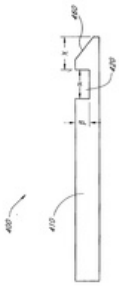


FIG.6

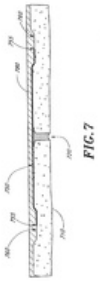


FIG.7

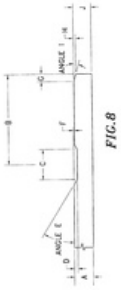


FIG.8

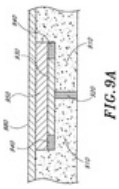


FIG.9A

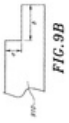


FIG.9B

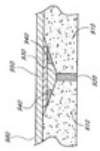


FIG.10A

FIG.10B

31. Process for making structural aggregate **pigments**. CA2067376 1990-03-28 INDUSTRIAL PROGRESS* 1991-04-13 1991-04-13

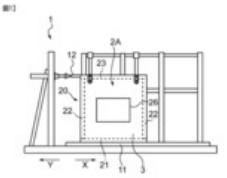
Process for manufacturing of structural aggregate **pigment** products with intrinsically built-in functional properties, from aqueous dispersions of particulate matter treated with in-situ formed complex functional microgels with rapid formation kinetics.

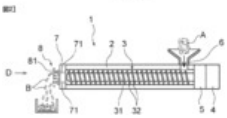
Element A (Inv)	0.49	1.0
Element B (Inv)	0.72	1.0
Element C (Inv)	1.00	2.0
Element D (Control)	1.73	3.5

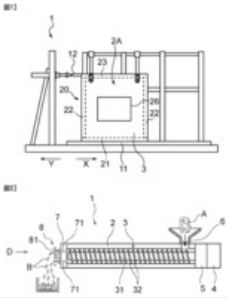
Element A (Inv)	0.49	1.0
Element B (Inv)	0.72	1.0
Element C (Inv)	1.00	2.0
Element D (Control)	1.73	3.5

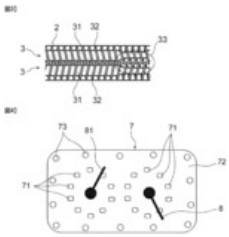
32. **Cement** material reinforcing **fiber** WO2018116500 2017-01-25 SUMITOMO FORESTRY* 2018-06-28 2018-06-28

A **cement** material reinforcing **fiber** of the present invention is made up of a lignocellulose **fiber** to which an antistatic agent is attached. Another **cement** material reinforcing **fiber** of the present invention is made up of a lignocellulose **fiber** to which a **fiber** surface **coating** agent is attached, the **fiber** surface **coating** agent being selected from the group consisting of a resin, a cellulose nanofiber, and a lignocellulose nanofiber. A **fiber** mixed **cement** material of the present invention comprises either one of said **cement** material reinforcing fibers and **cement**. This **fiber** mixed **cement** material preferably comprises small pieces of chopped lignocellulose material.



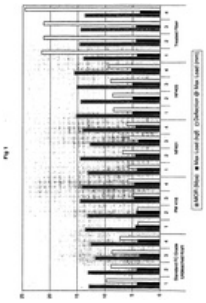


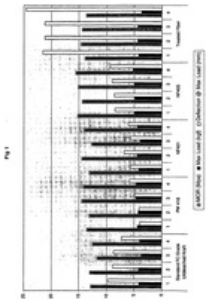




33. **Fiber cement** board with modified **fiber** CN101898881 2009-05-29 INTERNATIONAL PAPER WEYERHAEUSER* 2010-12-01 2010-12-01

A building material product comprising a **cementitious binder**, an aggregate and cellulose reinforcing fibers wherein the cellulose reinforcing fibers have been treated with cationic or nonionic oil. The resulting **fiber** when included in a **fiber cement** composite results in improved deflection of the composite at peak loading as well as improved impact strength while maintaining overall board strength.





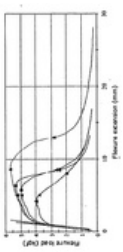


Fig. 2

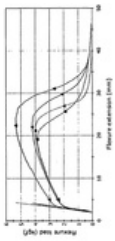


Fig. 3

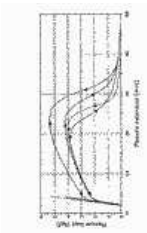


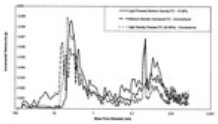
Fig. 3

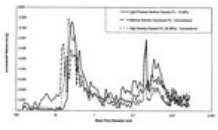
34. Rapid-curing aqueous **coating** agents WO200138447 1999-11-23 CELANESE* CLARIANT 2001-05-31 2001-05-31

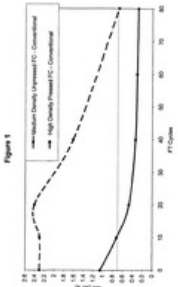
The invention relates to rapid-curing aqueous **coating** agents, containing at least one binding agent and at least one water-soluble, quaternary poly(allylamine). Said agents have rapid curing properties and do not discolour during the curing process. Poly(diallyl dialkyl ammonium chlorides) are particularly suitable for use as the water-soluble quaternary poly(allylamine). The inventive **coating** agents are suitable for use as dyes, rendering agents, primers and wood paints for external applications.

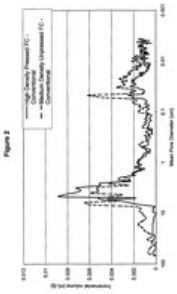
35.	A durable high performance fibre **cement** product and method of manufacture	AU2003901529	2003-03-31	JAMES HARDIE* JAMES HARDIE RESEARCH JAMES HARDY INTERNATIONAL FINANCE JAMES HARDY INTERNATIONAL FINANCE BETH ROTTEN FEN NOTE SHOP	2003-05-01	2003-05-01

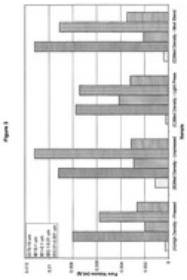
An engineered fibre reinforced **cement** product including a first major surface to which a carbonation reducing sealer is applied and a second generally opposing major surface to which a carbonation reducing sealer is applied, so as to reduce propensity for differential carbonation in the product. A method of manufacturing a durable fibre reinforced **cement** product, said method comprising steps of: (e) mixing a wet fibre reinforced **cement** formulation; (f) forming from said formulation a green product defining first and second generally opposing major surfaces; (g) curing the green product to form a cured product; and (h) applying a carbonation reducing sealer to said first and second major surfaces, so as to reduce propensity for differential carbonation in the product. An engineered fibre reinforced **cement** product including a first major surface with a reduced propensity to differential carbonation, wherein the product has a **cement** to silica ratio of between 0.29 and around 0.51 and a porosity of between 25% and around 45%.

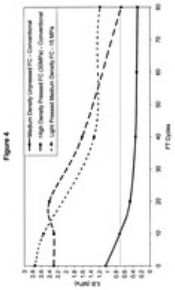


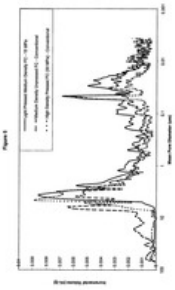


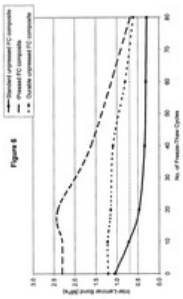






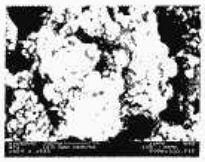


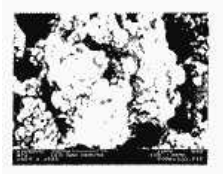


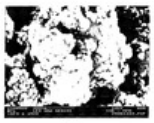


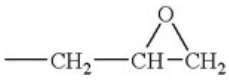
36.	Plasters and renders and paints, copolymer dispersions and their use	DE102006046860	2006-10-02	CELANESE CELANESE SALES GERMANY*	2008-04-03	2008-04-03

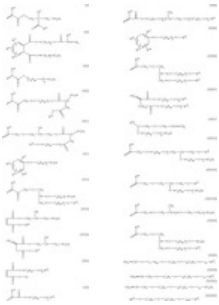
Compositions containing selected polymer dispersions, colloidal silicon dioxide, **fillers** and **pigments** are described. These can be formulated to produce plasters and renders or paints which have excellent abrasion resistance, a low soiling tendency, high water vapour permeability, good adhesion and good weathering stability. The compositions of the invention can be processed to produce plasters and renders or paints which have a nanostructured surface and differ from conventionally produced surfaces.

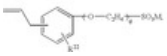












37.	Copolymer, useful as a **binder** for **coatings** and in **coating** agent, which is useful as a clear or topcoat for **coating** substrates, comprises (meth)acrylic acid ester compounds, and (meth)acrylic acid	DE102009000570	2009-02-03	EVONIK ROHM*	2010-08-05	2010-08-05

Copolymer comprises: 20-40 wt.% of at least one (meth)acrylic acid ester compound (1a); 5-20 wt.% of at least one (meth)acrylic acid ester compound (2a); 30-50 wt.% of at least one (meth)acrylic acid ester compound (3a); 2-10 wt.% of (meth)acrylic acid; and 0-15 wt.% of at least one (meth)acrylic acid ester compound (4a). Copolymer comprises: 20-40 wt.% of at least one (meth)acrylic acid ester compound of formula (CH 2=CR 1>-COO-C nH 2n+1) (1a); 5-20 wt.% of at least one (meth)acrylic acid ester compound of formula (CH 2=CR 1>-COO-R 2>) (2a); 30-50 wt.% of at least one (meth)acrylic acid ester compound of formula (CH 2=CR 1>-COO-R 3>) (3a); 2-10 wt.% of (meth)acrylic acid; and 0-15 wt.% of at least one (meth)acrylic acid ester compound of formula (CH 2=CR 1>-COO-R 4>) (4a). R 1>H or CH 3; n : 10-55, where C nH 2n+1is linear or branched; R 2>optionally substituted 1-6C alkyl; R 3>hydroxy-2-10C-alkyl; and R 4>optionally substituted 4-12C cycloalkyl. An independent claim is included for a **coating** agent comprising: 50-90 wt.% of the copolymer; 10-50 wt.% of one or more monomeric, oligomeric or polymeric isocyanate compounds; and one or more organic solvents, and optionally one or more **pigments**, **fillers** and/or conventional additives, in which the molar ratio of hydroxyl groups of the copolymer to the reactive groups of the isocyanate compounds is 0.5-1.5, where the solid content of the **coating** agent is 45-85 wt.%, and the solution viscosity of the **coating** agent according to DIN 4 (23[deg] C) is 10-40 sec.

38. Reinforcing **fiber** for **cement-based** molded body, method for producing the same, and **fiber**-reinforced **cement-based** molded body using the same — JP2018058757 — 2017-09-29 — UBE INDUSTRIES* — 2018-04-12 — 2018-04-12

PROBLEM TO BE SOLVED: To provide a novel technique capable of producing a polyolefin-based reinforcing **fiber** having high affinity with a **cement** slurry and excellent adhesion to a **cement** composition; and to provide a **fiber**-reinforced **cement-based** molded body using the **fiber**.SOLUTION: A reinforcing **fiber** for a **cement-based** molded body is formed by **coating** a surface of a polyolefin **fiber** with a layer comprising at least: a carbonate of an alkaline earth metal; and a **binder** which consists of a different composition from that of a polymer used in the polyolefin **fiber**.SELECTED DRAWING: None

39. **Coating** compositions for **coating** fibre **cement** board — CA3002281 — 2016-10-19 — BASF* — 2017-04-27 — 2017-04-27

The present invention relates to the use of **coating** compositions for **coating** fibre **cement** boards, which contain at least one acrylate based aqueous polymer dispersions as a **binder**. The present invention further relates to specific acrylate based aqueous polymer dispersions and to a process for preparing these specific acrylate based aqueous polymer dispersions.

40. Process for **coating** mineral products — NO991115 — 1998-03-09 — BASF* — 1999-03-08 — 1999-03-08

Method of **coating** mineral moldings with film-forming aqueous formulations involves applying first **coat**(s) containing copolymer(s) (P1) as **binder** and inorganic **pigment**(s); optionally drying; then applying **coat**(s) containing copolymer(s) (P2) as **binder** and optionally inorganic **pigment**, in which copolymers P1 and P2 consist of (A) vinyl-aromatic(s) (A1) and/or 1-4 C alkyl methacrylate(s) (A2), (B) 1-12 C alkyl ester(s) (B1) of alpha , beta -ethylenically unsaturated carboxylic acids, other than (A2), and/or vinyl esters (B2) of aliphatic carboxylic acids and optionally (C) other alpha , beta -ethylenically unsaturated monomer(s). The novelty is that P1 and P2 consist of the same monomers A and B and the **pigment** volume concentration (PVC) of the first formulation is at least 10 times higher than that of the second. Independent claims are also included for (a) the **coating** formulation system; and (b) mineral moldings **coated** in this way.

41. Aqueous **binder** combination, process for its preparation and its use — CA2059420 — 1991-01-19 — BAYER* — 1992-07-20 — 1992-07-20

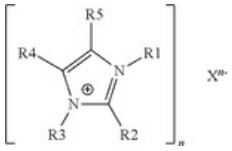
An aqueous **binder** combination essentially comprising A) an aqueous solution or dispersion of a polyester resin containing urethane, carboxylate and hydroxyl groups, and B) a polyisocyanate component having a viscosity at 23 DEG C of from 50 to 10,000 mPa.s, a process for the preparation of **coating** agents based on a **binder** combination of this type by emulsifying a polyisocyanate component of said type in an aqueous solution or dispersion of a polyester resin of this type, to which any assistants and additives also used have been incorporated in advance, and the use of **binder** combinations of said type as **binders** for paints, **coatings** or sealants.

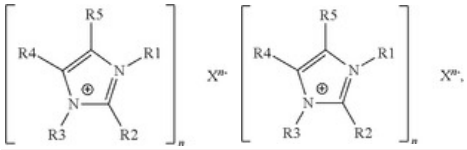
42. Aqueous **pigment** dispersion containing low molecular weight polytrimethylene ether glycol — WO2013028640 — 2012-08-20 — DU PONT DE NEMOURS* — 2013-02-28 — 2013-02-28

The present disclosure is directed to an aqueous **pigment** dispersion comprising low molecular weight polytrimethylene ether glycol. This disclosure is further directed to an antimicrobial aqueous **pigment** dispersion comprising the low molecular weight polytrimethylene ether glycol. The **pigment** dispersion can be used in **coating** compositions as interior and exterior top **coats**, basecoats, primers, primer surfacers and primer **fillers**. The disclosure is particularly directed to an aqueous **pigment** dispersion comprising components derived from renewable resources.

43. **Coating** compositions containing conductive **fillers** — WO2014198539 — 2014-05-28 — BASF* — 2014-12-18 — 2014-12-18

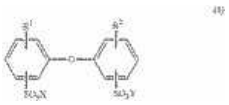
The invention relates to the use of organic **fillers** as additives for **coating** or sealing compositions, characterized in that - the organic **fillers** comprise at least 20% by weight of an organic polymer and - an ionic liquid.





44. Aqueous pigmented **coating** agents — EP1046682 — 1999-04-21 — BASF* — 2000-10-25 — 2000-10-25

An aqueous, pigmented **coating** material contains (i) a film-forming polymer dispersion based on 80-99.95 wt% 2-20C alkyl or 5 cycloalkyl (meth)acrylate(s), 0.05-10 wt% unsaturated carboxylic, sulfonic or phosphonic acid and optionally other monomers, (ii inorganic **pigment** and optional **fillers** and (iii) 0.05-0.3 wt% non-polymerizable photoinitiator. An aqueous, **pigment**-containing **coating** material with a **pigment** volume concentration of at least 10 and essentially free fro volatile organic compounds (VOC), containing (i) aqueous polymer dispersion(s) which are film-forming at room temperature, containing polymer(s) (P) derived from (A) 80-99.95 wt% (meth)acrylate esters of 2-20C alkanols or 5-10C cycloalkanols, (B) 0.05 wt% unsaturated carboxylic, sulfonic or phosphonic acid(s) and/or their salts and (C) 0-20 wt% monomers other than (A) and (B), inorganic **pigment**(s) and optionally inorganic or organic **fillers**, (iii) non-polymerizable photoinitiator(s) in amounts of betwee 0.05 and less than 0.3 wt% based on (P) and (iv) water and conventional auxiliary substances. An Independent claim is also inclu for a process for **coating** substrates by applying the above **coating** material to the substrate.

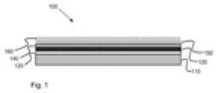


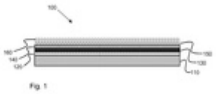
45. Method for applying and forming a film produced from a filmogen polymer aqueous dispersion on a surface based on a still humid mineral **binder** compound, the thus **coated** mineral **binder** compounds and the use thereof | FR2855827 | 2003-06-05 | HEXION SPECIALTY CHEMICALS* RHODIA CHIMIE | 2004-12-10 | 2004-12-10

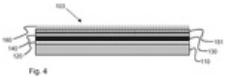
The invention relates a method for applying a finish **coat**, for example in the form of a paint or varnish on a surface based on a still humid mineral **binder** compound. Said invention relates, in particular to mineral **binder** compounds in the form of mould parts and prefabricated elements for construction, civil engineering or public works. It is possible to give an example of mould parts or prefabricated construction elements embodied in the form of **cement** or concrete tiles, said **cement** or concrete being reinforced or not by fibres, gypsum board liners, mould fibre **cement** elements or gypsum plasterboards.

46. Decorated surface structured wall or floor panel based on fibre **cement** board | EP3348419 | 2017-01-13 | AKZENTA PANEELE PROFILE* | 2018-07-18 | 2018-07-18

The invention relates to a decorated, surface-structured wall or floor panel (100) and a method for manufacturing same. The decorated, surface-structured wall or floor panel (100) of the invention comprises a substrate (110) made of a **fiber cement** material, a primer **coat** (120) on a surface of the substrate, a decorative **coat** (130) on the primer **coat**, a **coat** (140) of radiation-curable varnish or hot melt on the decorative **coat**, a structured plastic film (150) on the **coat** of radiation-curable varnish or hot melt, and a **coat** (160) of finishing varnish on the structured plastic film.
(From WO2018130401 A1)

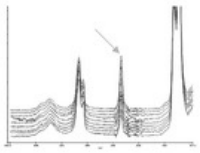


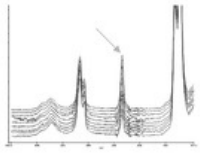


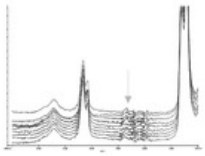


47. 2-component polyurethane **coating** on **fiber cement** | CA2849186 | 2011-10-06 | ETERNIT SCHWEIZ FIBRECEM HOLDING* | 2013-04-11 | 2013-04-11

The invention relates to a composition for the **coating** of a substrate composed at least partially of mineral materials, said composition containing a formulation that has at least two components and being characterized by a first component based on at least one OH-functionalized **binder** such as at least one polyacrylate having a styrene content approx. <= 30%, a second component containing at least one aliphatic isocyanate or a polymer thereof, and at least one organic-based **filler** such as polyurethane or polymethyl methacrylate.

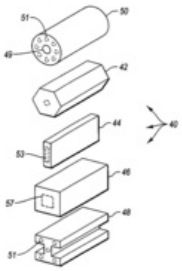


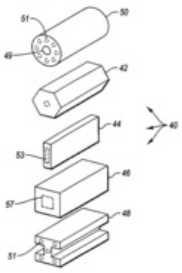


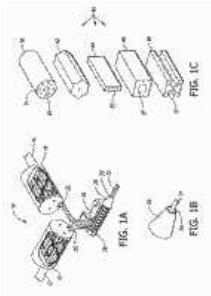


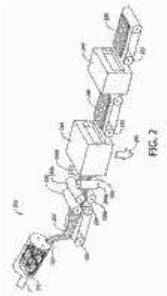
48.	Extruded **fiber** reinforced **cementitious** products having wood-like properties and ultrahigh strength and methods for making the same	US20100136269	2009-11-24	E KHASHOGGI INDUSTRIES* E KHASHOGGI INDUSTRY	2010-06-03	2010-06-03

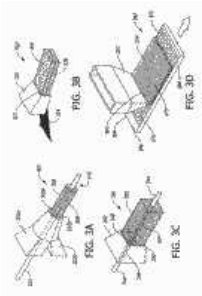
A method of manufacturing a **cementitious** composite including: (1) mixing an extrudable **cementitious** composition by first forming a fibrous mixture comprising fibers, water and a rheology modifying agent and then adding hydraulic **cement**; (2) extruding the extrudable **cementitious** composition into a green extrudate, wherein the green extrudate is characterized by being form-stable and retaining substantially a predefined cross-sectional shape; (3) removing a portion of the water by evaporation to reduce density and increase porosity; and (4) heating the green extrudate at a temperature from greater than 65°C to less than 99°C is disclosed. Such a process yields a **cementitious** composite that is suitable for use as a wood substitute. Particularly, by using higher curing temperatures for preparing the **cementitious** building products, the building products have a lower bulk density and a higher flexural strength as compared to conventional products. The wood-like building products can be sawed, nailed and screwed like ordinary wood.

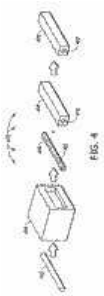


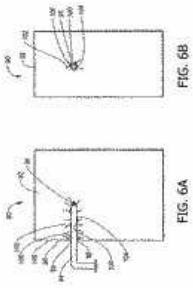


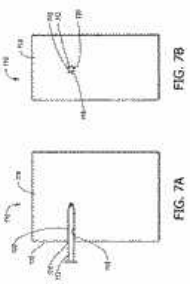


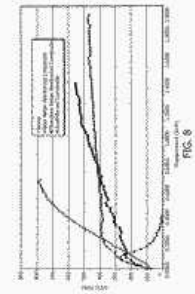


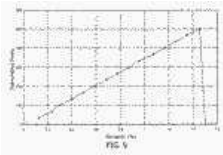






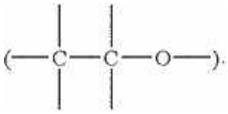


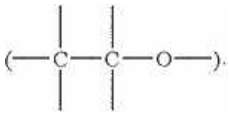


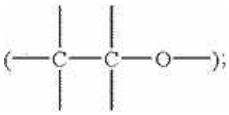


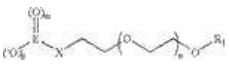
49.	Exterior **coating**, composition used for such **coatings** and method for obtaining the same	WO9838231	1998-03-02	RHODIA CHIMIE VENCOREX FRANCE*	1998-09-03	1998-09-03

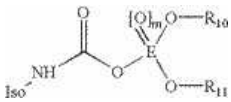
The invention concerns a composition used in particular for **coating** factory floors and exterior surfaces. Said composition is characterised in that it comprises in successive or simultaneous addition: an aqueous phase comprising a dispersion of polyol with a glass temperature (tg) between -50 and +40 DEG C; an isocyanate sub-composition already or to be emulsified. The invention is applicable as **coating** for mineral supports with variable porosity such as concrete, mortar, frontage **coatings**, gypsum plaster, stone... .

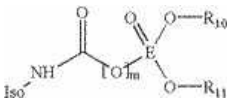


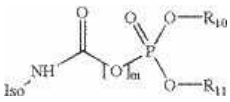


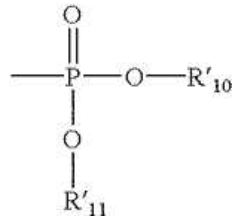












50.	**Fiber cement** products	WO2006050338	2005-11-01	VALSPAR*	2006-05-11	2006-05-11

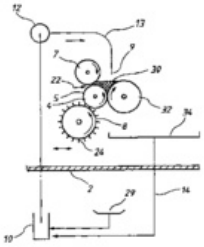
A product that includes a **cement-based** substrate, a first **coating**, and a topcoat powder **coating** layer is described. Also described is a method of making a product that includes providing a **cement-based** substrate, applying a first **coating**, and applying a topcot powder **coating** layer. Also described is a method of making a product by providing a pre-primed or pre-sealed **cement-based** substrate and applying a topcoat layer including a powder **coating**.

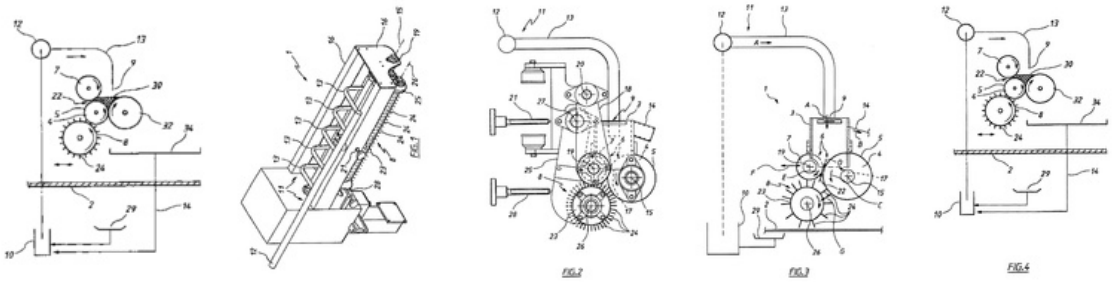
51.	Method, assembly and additional **coat** for the construction of interior works	WO200212144	2001-07-31	LAFARGE PLATRES* RAFARUJU PURATORU	2002-02-14	2002-02-14

The present invention provides a construction assembly for interior works, comprising: prefabricated elements, e.g. gypsum fiberboards, wherein said prefabricated elements comprise a **coating** layer formed of at least one skim **coat** deposited on said prefabricated elements; and at least one jointing material, e.g. a sealing **coat**, which joints adjacent said prefabricated elements to form a substantially plane outer surface comprising the visible surface of said at least one jointing material and the visible surface of the skim **coated** prefabricated elements, wherein said at least one jointing material and said at least one skim **coat** comprise a mineral **filler**, a **binder** and water; and wherein the composition of said at least one jointing material and said at least one skim **coat** are adapted to each other, whereby said at least one skim **coat** are adapted to each other, whereby said at least one jointing material and said skim **coat** form, both in a dry state, a substantially homogeneous surface and whereby said outer surface is ready to be decorated.

52.	A composite product	WO02070421	2002-03-01	CAMPAGNE JAMES HADI RESEARCH JAMES HARDIDE RESEARCH JAMES HARDIE* JAMES HARDIE RESEARCH JAMES HARDY INTERNATIONAL FINANCE JAMES HARDY INTERNATIONAL FINANCE BETH ROTTEN FEN NOTE SHOP NETHERLANDS 1 0 7 7 ZETTUKS AMSTERDAM STRAVINSKIRAN 3 0 7 7 ATRIUM EIGHT FLOOR JAMES HARDY RESEARCH PRO PRE TRIORED	2002-09-12	2002-09-12

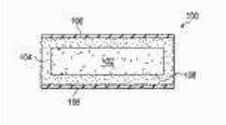
A method of manufacturing a composite product comprising providing a substrate layer and a slurry formulation including a hydraulic **binder** and dewatering agent. The slurry is then applied to the substrate layer to form a functional layer and the functional layer dewatered through the substrate layer. The application of the slurry to form the functional layer and dewatering steps can be repeated to build up a laminated composite product. Functional additives may be included in each layer to provide desired properties to that layer and indeed to the subsequent composite product.

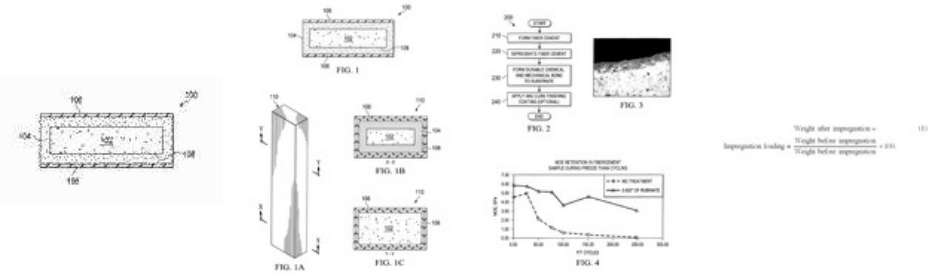




53.	Engineered composite building materials and methods of making same	US20080141908	2006-12-13	JAMES HARDIE* JAMES HARDY INTERNATIONAL FINANCE BETH ROTTEN FEN NOTE SHOP	2008-06-19	2008-06-19

An engineered composite building material, such as **fiber cement**, having one or more engineered sub-surface regions designed to provide the building material with improved moisture ingress resistance, paint adhesion, and other mechanical properties is provided. The sub-surface region has a **cement-polymer** matrix formed by introducing an impregnating agent into the pores of the substrate. The composite building material may be formed by applying impregnating agents to the subsurface regions of the substrate to form chemical and/or mechanical bonds with the matrix of the building material, the reinforcement fibers, and/or the surface **coatings** applied to the material. The thickness of the sub-surface regions may be controlled by varying the viscosity and porosity of the building material substrate. The **cement-polymer** building material has enhanced durability, weather resistance, strength, and stiffness.





54.	**Coating** agent with high weathering resistance, method for its manufacture and application	CN101348637	2007-07-19	CELANESE CELANESE SALES GERMANY*	2009-01-21	2009-01-21

Coating agent comprises a **pigment** and/or a **filler** and a multi-stage polyvinylester dispersion obtained by (a) polymerization of a vinylester of a saturated carboxylic acid and optionally further monomers copolymerizable by it in the presence of at least one emulsifying agent and/or at least a protective colloid; (b) addition of at least a radical polymerizable monomer different from the vinylester used in step (a) to the polymerization mixture; and (c) addition of at least one initiator of the radical polymerization.

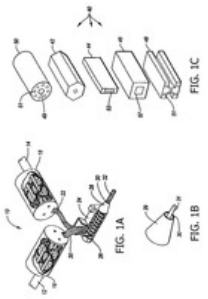
Siebrückstand (%) = ((G1 – G2) x 100) / Einwaage

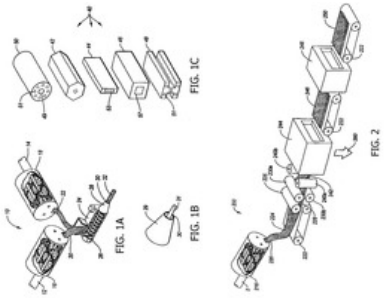
Coating agent comprises a **pigment** and/or **filler** and a multi-stage polyvinylester dispersion obtained by (a) polymerization of a vinylester of a saturated carboxylic acid and optionally further monomers copolymerizable by it in the presence of at least one emulsifying agent and/or at least a protective colloid up to a conversion of at least 90% of used monomers; (b) addition of at least a radical polymerizable monomer different from the vinylester used in step (a) in pure form, in form of a solution or in form of an emulsion to the polymerization mixture; and (c) addition of at least one initiator of the radical polymerization after the completion of the addition of monomers in step (b), so that the added monomers in step (b) are polymerized in the presence of the dispersion produced in step (a). An independent claim is included for the polyvinylester dispersion, where the concentration of polymeric acids and/or the acid anhydride in the multi-stage polyvinylester dispersion does not exceed 6 wt.%, related to the total monomer quantity.

Siebrückstand (%) = ((G1 – G2) x 100) / Einwaage

55.	Extruded **fiber** reinforced **cementitious** products having stone-like properties and methods of making the same	US20110120349	2009-11-24	E KHASHOGGI INDUSTRIES* E KHASHOGGI INDUSTRY	2011-05-26	2011-05-26

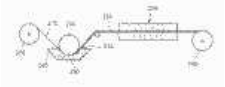
A **cementitious** composite product having stone-like properties, the product comprising an extrudable **cementitious** composition comprises a hydraulic **cement**, an aggregate, a rheology-modifying agent in an amount of from about 0.1 % to about 4% (by volume of the extrudable cemetitious compoisition), and fibers substantially homogeneously distributed through the extrudable **cementitious** composition and included in an amount greater than about 2% (by volume of the extrudable **cementitious** composition), wherein the **cementitious** composite product has a hardness value of at least 4 MOH and a bulk density of at from about 1.3 g/cm 3 to about 2.3 g/cm 3 .

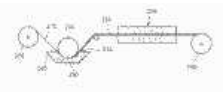


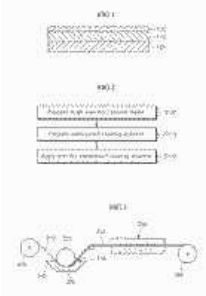


56.	Surface-waterproofing base for mineral board using a mixed-use nonwoven fabric and a waterproofing **coating** layer, and a production method therefor	WO2012036466	2010-09-14	ELGY HOUSSIS LG HAUSYS LG HAUSYS*	2012-03-22	2012-03-22

The present invention relates to a surface-waterproofing base for mineral board using a mixed-use nonwoven fabric and a waterproofing **coating** layer, and to a production method therefor, and relates to an invention wherein a surface-waterproofing base, in which a waterproofing **coating** layer is formed on top of a single nonwoven fabric, is produced by providing the steps of: producing a mixed-use nonwoven fabric by mixing cellulose fibre, glass fibre and an organic fibre; producing a waterproofing **coating** liquid comprising an acrylic **binder** solid fraction, water, an inorganic **filler**, a water-repelling agent, a **pigment** and an antimicrobial agent; and **coating** and drying the waterproofing **coating** liquid on top of the mixed-use nonwoven fabric; thereby making it possible to improve adhesion with the mineral board and to provide an economic surface-waterproofing base for buildings.

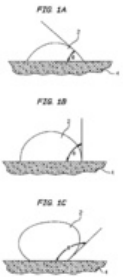


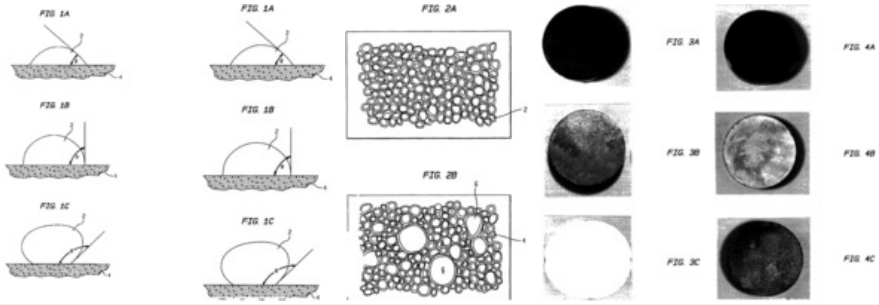




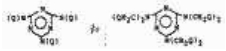
57.	Method for producing efflorescence resistant **coating** on **cementitious** substrate	CA2181622	1996-07-02	ROHM & HAAS*	1997-01-21	1997-01-21

The present invention is directed to producing an efflorescence resistant sealer **coating** on a **cementitious** substrate, such as, a roof tile. A foamed layer of an efflorescence resistant **coating** composition is preferably applied on the surface of a wet **cementitious** substrate. The wet **cementitious** substrate is then hydrated to produce the **cementitious** substrate having the efflorescence resistant **coating** thereon. If desired, the efflorescence resistant **coating** composition is provided with a **pigment** to produce a pigmented efflorescence resistant **coating** on the **cementitious** substrate or a clear efflorescence resistant **coating** of the present invention may be applied over pigmented **cementitious** substrate. The efflorescence resistant **coating** produced in accordance with the process of the present invention substantially reduces the formation of esthetically unpleasant efflorescent layer on **cementitious** substrate surfaces.

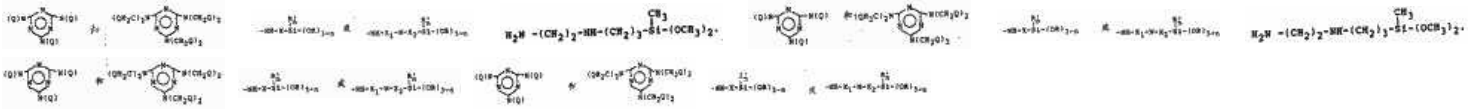




58. Triazine-containing multisilane coupling agents for **coating** glass fibers, for adhesives, and for protective **coatings** NO891086 1988-03-28 GEON
GOODRICH
JIION
LINCOLN & SOUTHERN RAILROAD*
POLYMER DIAGNOSTICS*
POLYONE*
POLYONE DISTRIBUTION*
POLYONE ENGINEERED FILMS* 1989-03-14 1989-03-14



At least three, and as many as eighteen, most preferably at least nine, crosslinking sites are provided through the alkoxy groups in multiple chains on a triazine ring (hence "multisilane"), on a single molecule of the multisilane. The multisilane, useful as a coupling agent, is formed by reacting a triazine-containing compound with a suitable aminoalkyl-alkoxysilane, or, alkyl-aminoalkyl-alkoxysilane in either an anhydrous, or an aqueous liquid medium. A size containing the multisilane, enhances the reinforced properties of organic synthetic resinous materials in which the fibers are used, and most particularly those of rigid poly(vinyl chloride) (PVC) with which it provides cohesive bonding of glass **fiber** surfaces. Glass fibers **coated** with a basic film former and the multisilane are covalently bonded on the one hand through some of at least nine alkoxy groups on each of the multisilane molecules, to Si atoms of a glass surface, and on the other hand, through at least some of the amine groups on each of the molecules, to the vinyl chloride (VC) resin in a reaction which involves allylic chloride bonds in the VC resin. The multisilane is effective in adhesives for a wide variety of materials, and in protective **coatings**.



59. Aqueous **binder** combination and its use MX9206366 1991-11-18 BAYER*
ICI - IMPERIAL CHEMICAL INDUSTRIES 1993-05-01 1993-05-01

An aqueous **binder** combination essentially comprising A) an aqueous solution or dispersion of a water-dilutable organic polyol component, essentially comprising at least one carboxylate- or hydroxyl-containing polyester resin which is grafted with vinyl monomers, and B) a polyisocyanate component emulsified in component A), a process for the preparation of **coating** compositions based on a **binder** combination of this type, by emulsification of a polyisocyanate component B) in an aqueous solution or dispersion A) of a water-dilutable polyol component of this type, where the mixing ratios between the two components correspond to an NCO/OH equivalent ratio of from 0.5:1 to 5:1, and the use of the **binder** combination as **binders** for paints (lacquers, varnishes, enamels), **coating** compositions or sealants.

60. Polysiloxane-**coated** iron oxide **pigments** EP2380860 2010-04-23 ROCKWOOD ITALIA* 2011-10-26 2011-10-26

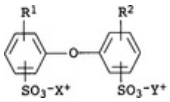
The present invention relates to iron oxide particles, consisting of a core and a **coating**, wherein the core is essentially selected from FeO(OH), Fe 2 O 3 , or Fe 3 O 4 , and mixtures thereof, and the **coating** comprises a polysiloxane **coating**, wherein the polysiloxane **coating** is present in an amount of 0.1 % to 10% by weight based on the weight of the core.

61. Aqueous, pigmented **coating** material, especially for bituminous substrates, contains two copolymers with different glass transition temperatures, at least one with organo-silicon comonomer units DE19856148 1998-12-04 BASF* 2000-06-08 2000-06-08

$$\frac{1}{T_G} = \frac{X^1}{T_G^1} + \frac{X^2}{T_G^2} + \cdots\cdots \frac{X^n}{T_G^n}$$

Aqueous, **pigment**-containing **coating** material with a film-forming component comprising two copolymers (A) and (B) with glass transition temperatures of +20 to +70 deg C (TgA) and -30 to +50 deg C (TgB) respectively, in which (A) and/or (B) contains 0.1-5.0 wt% organosilicon comonomer units and the values of TgA and TgB differ by at least 5 K. An aqueous, **pigment**-containing **coating** material with a **pigment** volume concentration (PVC) of 5-25, containing **pigment**(s) and/or **filler**(s) and the following film-forming components in dispersed form: (a) 30-90 parts by weight (pts. wt.) copolymer (A) with a Tg of +20 to +70 deg C (TgA) and (b) 10-70 pts. wt. copolymer (B) with a Tg of -30 to +50 deg C (TgB). Copolymer (A) and/or (B) contain(s) 0.1-5.0 wt% polymerized units of organosilicon compound(s) and the values of TgA and TgB differ by at least 5 K. An Independent claim is also included for a method for **coating** bituminous substrates with this material.

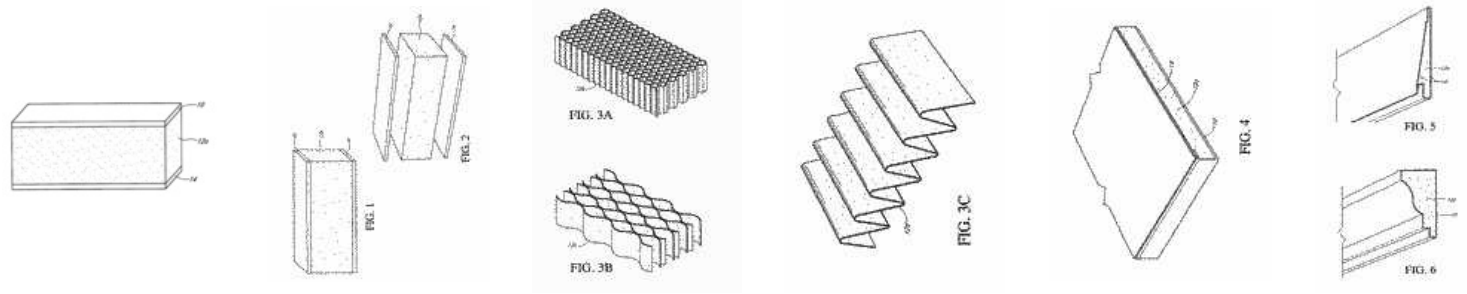
$$\frac{1}{T_G} = \frac{X^1}{T_G^1} + \frac{X^2}{T_G^2} + \cdots\cdots \frac{X^n}{T_G^n}$$

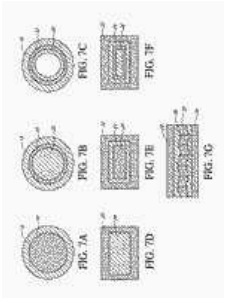


(I)

62. Composite building material | WO200231287 | 2001-10-03 | GLEESON JAMES A
JAMES A GLEESON
JAMES HARDIE*
JAMES HARDIE RESEARCH | 2002-04-18 | 2002-04-18

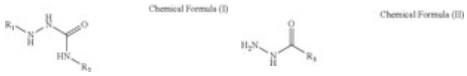
This invention generally pertains to a composite building material comprising a lightweight core with a thin **fiber cement** facing on one side of the core and a second facing material on the other side. The **fiber cement** facing that is used on at least one of the faces of the building material is 3/16" or less, more preferably 1/8" or less. The green **fiber cement** facing is preferably formed by a slurry-dewatering process to form a sheet that is in a plastic, uncured, state prior to manufacture of the composite. The composite building material is assembled in an uncured state and then cured.





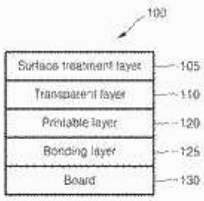
63. Waterborne **coating** compositions for soft touch **coatings** | US20150307738 | 2014-04-25 | PPG INDUSTRIES* | 2015-10-29 | 2015-10-29

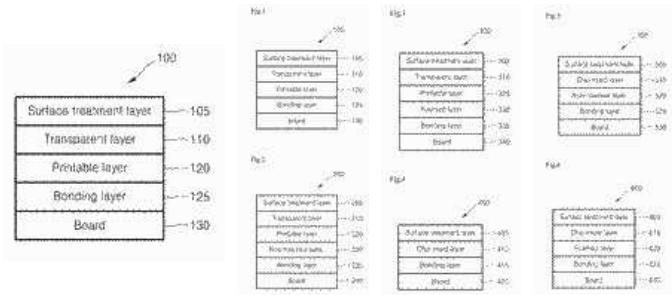
A waterborne **coating** composition includes an aqueous polyurethane resin, a reactive silicone component, and a crosslinker. The aqueous polyurethane resin can have urethane linkages, hydrazinecarboxamide linkages, and reactive hydrazide functional groups. The polyurethane resin can have a glass transition temperature of less than 25°C. Methods of preparing waterborne **coating** compositions and substrates at least partially **coated** with waterborne **coating** compositions are also disclosed.



64. Board complex having a pla cover | KR20110110062 | 2011-03-30 | ELGY HOUSSIS LG HAUSYS
ELSIE HOUSSYS
LG HAUSYS* | 2011-10-06 | 2011-10-06

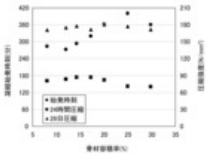
The present invention relates to a board complex having a polylactic acid (PLA) cover. The board complex includes: a cover member having at least one layer containing a PLA resin; and a board formed beneath the cover member, wherein the material for the board is selected from medium-density fiberboard (MDF), plywood, asbestos-free cellulose **fiber** reinforced **cement** board, magnesium board, glued laminated timber, high density fiberboard (HDF), particle board, ceramic tile, porcelain tile, ceramic board, and click-fastened board.

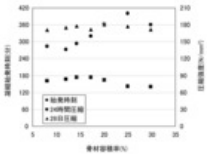


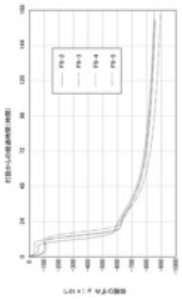


65. **Cement** composition, **cement** matrix, **fiber**-reinforced **cement-based** mixture, and **cement** admixture | JP2014024691 | 2012-07-25 | TAISEI* | 2014-02-06 | 2014-02-06

PROBLEM TO BE SOLVED: To provide a **cement** composition in which expression of early strength that enables introduction of prestress in atmospheric temperature cure and attainment to high long age strength can be performed, and satisfactory serviceable life can be secured.SOLUTION: A **cement** composition includes: 100 pts.wt. of high early strength portland **cement** or super high early strength portland **cement**; 5-18 pts.wt. of silica fume; 5-30 pts.wt. of limestone fine powder; and 25-69 pts.wt of blast furnace slag fine powder. Moreover, a **cement** matrix, a **fiber**-reinforced **cement-based** mixture or a **cement** admixture has the same composition as that of the **cement** composition.

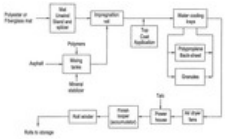


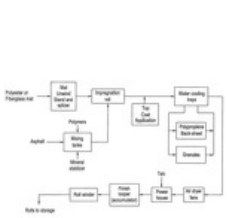


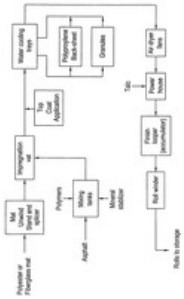


66. Process for **coating** modified bitumen membranes using reflective laminate **coatings** | US20050257875 | 2004-05-21 | BMCA ACQUISITION*
BMCA ACQUISITION SUB*
BMCA FRESNO*
BMCA FRESNO II*
BMCA GAINESVILLE*
BMCA INSULATION PRODUCTS*
BMCA QUAKERTOWN*
BUILDING MATERIALS INVESTMENT*
BUILDING MATERIALS MANUFACTURING*
DUCTWORK MANUFACTURING*
GAF BUILDING MATERIALS*
GAF LEATHERBACK*
GAF MATERIALS*
GAF PREMIUM PRODUCTS*
GAF REAL PROPERTIES*
GAFTECH*
HBP ACQUISITION*
LL BUILDING PRODUCTS*
PEQUANNOCK VALLEY CLAIM SERVICE*
SOUTH PONCA REALTY*
WIND GAP REAL PROPERTY ACQUISITION* | 2005-11-24 | 2005-11-24

A method of applying a laminate composition containing a whitening **pigment** during manufacture of modified bitumen roll roofing membranes, is provided. The laminate composition is heat activated providing greater adherence to surfaces that it applied to, and greater reflective properties. The laminate has an initial energy efficiency rating greater than or equal to 0.65 for a low-sloped roof, or an initial energy efficiency greater than or equal to 0.25 for a steep-sloped roof.





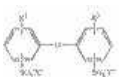


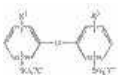
67. **Binder** combination, process for its preparation and its use | CA2080457 | 1991-10-15 | BAYER* | 1993-04-16 | 1993-04-16

An aqueous **binder** combination essentially comprising an aqueous solution or dispersion of at least one water-dilutable polyester resin containing sulphonate and hydroxyl groups, which solution or dispersion may optionally contain polyhydric alcohols having a molecular weight of below 500 as reactive thinners, and a polyisocyanate component in the form of an emulsion in this solution or dispersion, a process for the preparation of **coating** compositions in which a polyisocyanate component which is liquid at room temperature is incorporated in an aqueous solution or dispersion of this type of a polyester resin containing sulphonate groups, which solution or dispersion optionally contains a reactive thinner, while maintaining an NCO/OH equivalent ratio of from 0.5:1 to 5:1, any assistants used being incorporated into the solution or dispersion before addition of the polyisocyanate component, and the use of the **binder** combinations according to the invention as **binders** for paints, surface **coatings** or sealants.

68. Aqueous compositions comprising a film forming polymer and an anionic emulsifier | NO993632 | 1998-07-28 | BASF* | 1999-07-27 | 1999-07-27

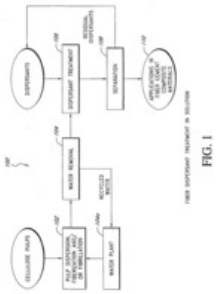
A method of **coating** a mineral molding includes applying at least one aqueous preparation to at least one surface of the molding, the aqueous preparation including:(i) as film-forming constituent at least one polymer P which is composed of ethylenically unsaturated monomers M and which is present in dispersed form in the aqueous phase of the aqueous preparation and which has a glass transition temperature TG in the range from -25 to +80° C.;(ii) at least one anionic emulsifier selected from the group consisting of (a), (b), and (c):(a) salts of formula I: whereinAlk is linear or branched, saturated alkyl having from 10 to 18 carbon atoms,Et is 1,2-ethylene,n is an integer from 25 to 40, andM^+ is a monovalent cation or a cation equivalent,(b) mixtures of salts of formula I; and(c) mixtures of salts of formula I with other anionic emulsifiers, wherein the salts of formula I make up at least 80% by weight of the anionic emulsifiers; and(iii) at least one nonionic emulsifier.
(From US6472024 B1)

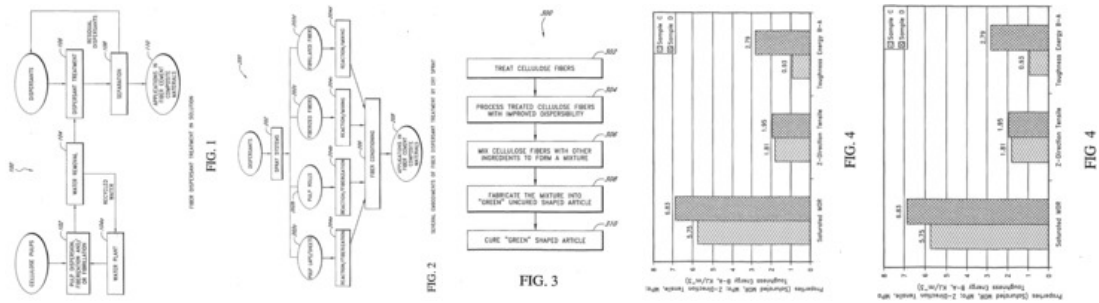




69.	**Fiber** reinforced **cement** composite materials using chemically treated fibers with improved dispersibility	WO02072499	2002-02-22	JAMES HARDIE* JAMES HARDIE RESEARCH JAMES HARDY INTERNATIONAL FINANCE BETH ROTTEN FEN NOTE SHOP NETHERLANDS 1 0 7 7 ZETTE X AMSTERDAM STRAW SKYLARK 3 0 7 7 8 FLOOR ATRIUM	2002-09-19	2002-09-19

A **fiber**-reinforced building material in one embodiment incorporates synthetic fibers that are chemically treated with a dispersant to impart improved dispersibility to the fibers. The fibers are treated with a dispersant which deactivates the hydroxyl sites of the **fiber** surfaces and in some cases, making the **fiber** surface more hydrophobic. The dispersant inhibits the hydroxyl groups on the cellulose **fiber** surface from bonding with hydroxyl groups of other fibers and from bonding with hydroxyl groups of the same **fiber**, thereby significantly reducing inter-**fiber** and intra-**fiber** hydrogen bonding. The treated fibers can be readily dispersed and uniformly distributed throughout a mixture without re-clustering or reclumping once the mechanical mixing action stops. The chemically treated fibers with improved dispersibility improve the **fiber** distribution and reinforcing efficiency, which in turn improves key physical and mechanical properties of the material such as the modulus of rupture, z-direction tensile strength, and toughness, and surface finishes. With improved **fiber** reinforcing efficiency, less dosage of **fiber** is needed to achieve the required physical and mechanical properties.



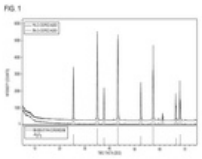


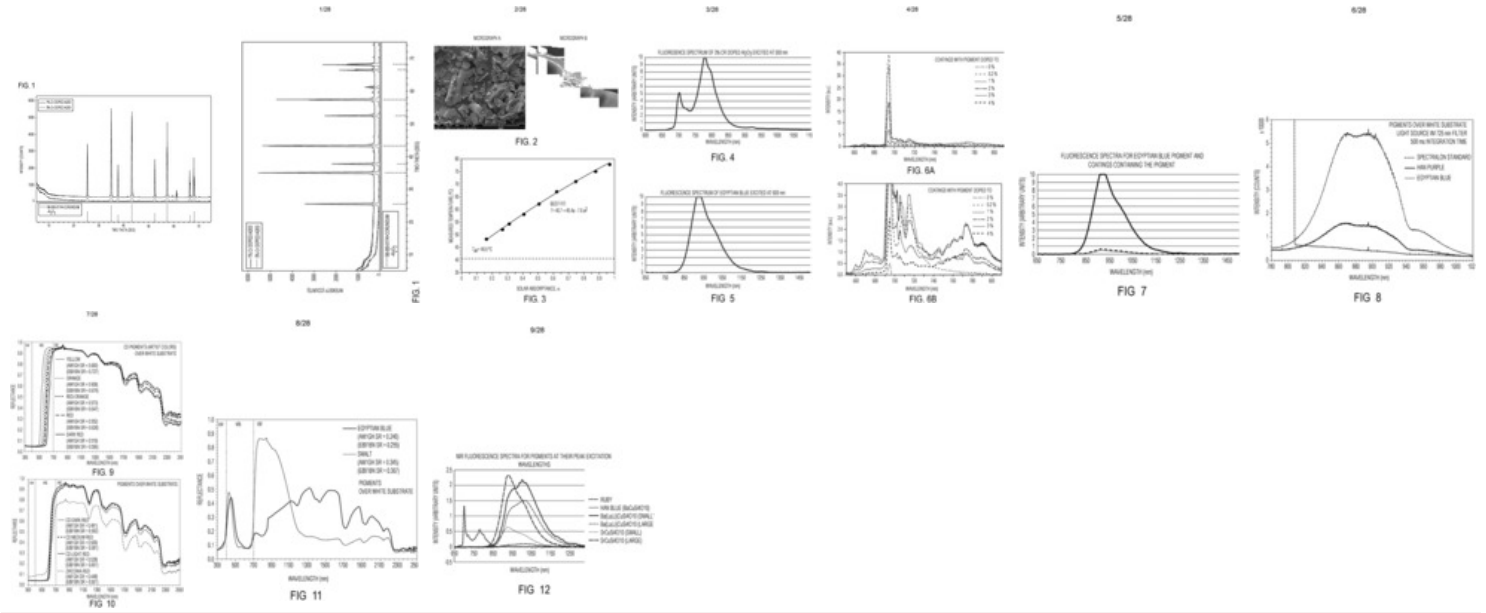
70.	Polymer-modified **fiber-cement** composition	US20160280600	2016-03-23	DU PONT DE NEMOURS*	2016-09-29	2016-09-29

A method for providing a polymer-modified **fiber-cement** composite by forming an aqueous composition including admixing an aqueous dispersion comprising a water dispersible ionomer and an ethylene elastomer, an ethylene dicarboxyl copolymer, an ethylene ester copolymer or a grafted copolymer, **cement**, cellulosic fibers, siliceous material, and water; forming a composite precursor by removal of at least some of the water; and curing/drying the composite precursor at a temperature at least 10° C. higher than the Tg of the polymer is provided. Polymer-modified **fiber-cement** composites formed by the method and articles therefrom are also provided.

71.	Infrared fluorescent **coating** compositions	CA3009884	2016-10-28	PPG INDUSTRIES* UNIVERSITY OF CALIFORNIA*	2017-07-06	2017-07-06

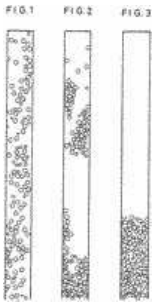
A **coating** composition includes: (i) a film-forming resin; (ii) an infrared reflective **pigment**; and (iii) an infrared fluorescent **pigment** different from the infrared reflective **pigment**. When the **coating** composition is cured to form a **coating** and exposed to radiation comprising fluorescence-exciting radiation, the **coating** has a greater effective solar reflectance (ESR) compared to the same **coating** exposed to the radiation comprising fluorescence-exciting radiation except without the infrared fluorescent **pigment**. A multi-layer **coating** including the **coating** composition, and a substrate at least partially **coated** with the **coating** composition is also disclosed. A method of reducing temperature of an article includes applying the **coating** composition to at least a portion of the article.

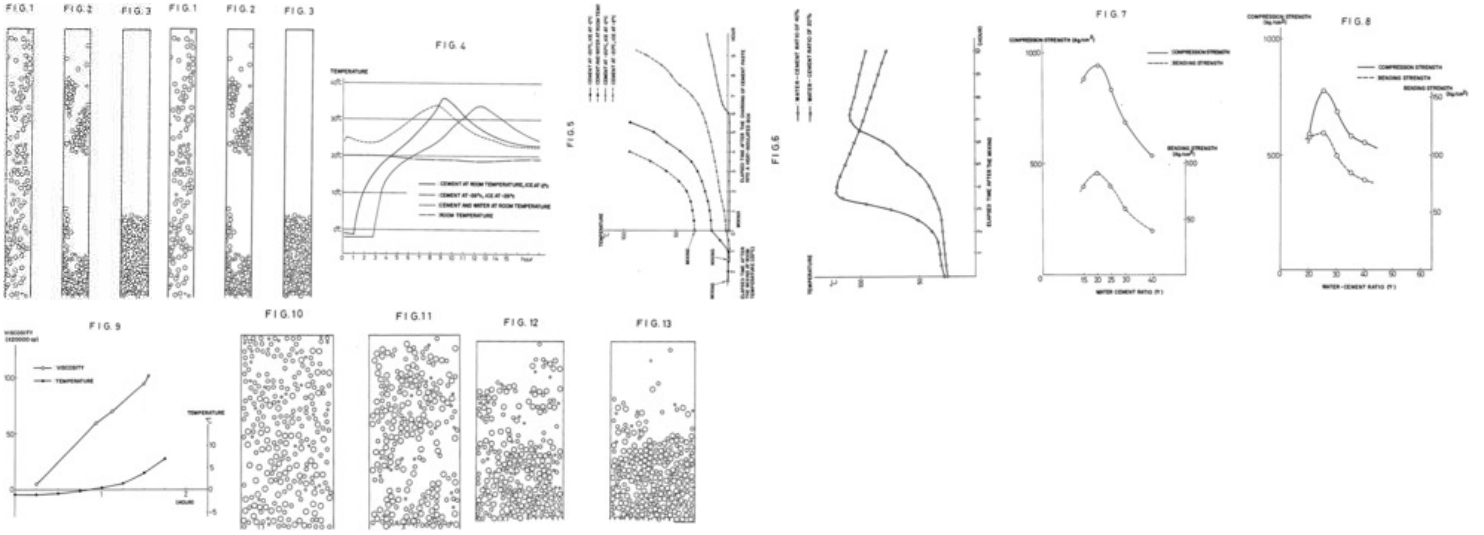




72. Process for producing mortar and method for applying the same | CN86100892 | 1985-12-28 | TOSHIRO SUZUKI | 1986-12-31 | 1986-12-31

This improved process produces concrete, mortar etc. at a low water to **cement** ratio and uses ice blocks instead of water. **Cement**, aggregates such as sand, gravel etc. and small ice blocks are mixed at a low water-to-**cement** ratio to prepare a macroscopically uniform system consisting of a pseudo solid phase wetted with a small amt. of molten water formed on the surface of the ice blocks. Then the ice blocks gradually melt to produce a homogeneous mixture prior to the application of the mortar. The ice blocks are ice sliced with an ice slicer, granular ice, small pieces of ice or snow. A powder of water-soluble polymer (methyl cellulose) can be added direct to the ice-**cement** mixture or an aq. soln. of this polymer can be frozen to form the ice blocks. This process can be used to obtain heavy wt. concrete that contains high specific gravity (at least 3.0) aggregates using a water **cement** ratio of 45% or less. The process can be used to produce mortar having a low-temp. tolerance (for this use the water/concrete ratio up to 45%), or to produce reinforced mortar (the ice contains the reinforcement materials.).





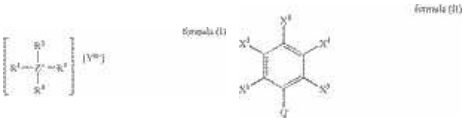
73. Preparation of novel radiation-curable **binders** | CA2518135 | 2004-09-09 | ALLNEX IP
ALLNEX IP S Ã** R L*
ALLNEX NETHERLANDS*
BAYER MATERIALSCIENCE | 2006-03-09 | 2006-03-09

A **binder** is prepared by reacting isocyanate-functional compound(s) containing uretdione groups; compounds that contain isocyanate-reactive groups and contain groups that react with ethylenically unsaturated compounds; saturated, hydroxyl-containing compound(s); and a catalyst containing ammonium salts or phosphonium salts of aliphatic or cycloaliphatic carboxylic acids. Preparation of a **binder** containing allophanate groups, groups that react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation (radiation-curing groups), and optionally isocyanate (NCO)-reactive groups, which comprises reacting at 130[deg]C NCO-functional compound(s) containing uretdione groups; compounds that contain isocyanate-reactive groups and contain groups that react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation (radiation-curing groups); saturated, hydroxyl-containing compound(s), at least one of these compounds having an OH functionality of 2; and a catalyst containing one or more ammonium salts or phosphonium salts of aliphatic or cycloaliphatic carboxylic acids, the reaction hydroxyl-containing compounds taking place at least proportionally with the formation of allophanate groups. An independent claim is also included for a **coating** composition comprising: (1) **binders**; (2) optionally polyisocyanate(s) which contain free or blocked isocyanate groups and optionally contain groups which react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation; (3) optionally compounds other than the polyisocyanate(s) which contain groups which react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation and optionally contain NCO-reactive groups; (4) optionally isocyanate-reactive compound(s) which are free from groups which react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation; and (5) initiators.

(Vergleichs) Beispiel	2	5	6
Reaktionszeit nach Zugabe des Katalysators	14,0 h	1,5 h	2,5 h
Visuelle Beurteilung	Klar	Starke Trübung	Starke Trübung
Feststoff [%]	81,1	81,7	82,2
Viskosität [mPa s]bei 23°C	3100	13000	16000

74. Production of novel radiation-hardening binding agents | US20050209361 | 2004-03-17 | ALLNEX IP S Ã** R L*
ALLNEX NETHERLANDS*
BAYER MATERIALSCIENCE
BAYER Â· MATERIALS SCIENCE Â· | 2005-09-22 | 2005-09-22

The invention relates to a method for producing novel binding agents comprising groups reacting with polymerising ethylenically unsaturated compounds under the action of actinic radiation and optionally also isocyanate-reactive groups. The invention also relates to the use of said binding agents in **coating** substances.



75. Aqueous **binder** combination having extended pot life, process for their preparation and their use | CA2179708 | 1995-06-26 | BAYER* | 1996-12-27 | 1996-12-27

An aq. **binder** comprises a combination of: (A) 65-97 wt.% aq. polyol of 23 degrees C viscosity of 25-15,000 mPa.s; and (B) 3-35 wt.% polyisocyanate component of 23 degrees C viscosity of 50-10,000 mPa.s contg. at least one organic polyisocyanate. The equiv. ratio of NCO gps. in (A):OH gps. in (B) = 0.3-2:1. The novel feature is that component: (A) comprises a mixt. of: (A1) an OH contg. aq. polyester dispersion or soln. comprising an OH-, carboxylate- and/or sulphonate-gp.-contg. polyester resin of ave. mol.wt. (Mw) 1,000-40,000, OH No. 15-100 mg KOH/g dispersion or soln. and acid no. (COOH or COOH + SO3H) 2-30 mg KOH/g, this polyester being the reaction prod. of components (a1)-(a4) as listed below; and (A2) a physically-drying aq. dispersion of a polyurethane contg. carboxylate and/or sulphonate gps. Reaction components (a1)-(a4) are as follows: (a1) 65-100 wt.% polyester pre-condensate from (i) 0-40 wt.% monocarboxylic acids, (ii) 20-65 wt.% di-, tri- and/or tetra-functional alcohols, (iii) 20-60 wt.% di- and/or tri-functional carboxylic acids or anhydrides and (iv) 0-10 wt.% sulphonate-, carboxyl- and/or OH-contg. component; (a2) 0-15 wt.% carboxylic acid anhydride or hydroxycarboxylic acid; (a3) 0-22 wt.% of an at least difunctional isocyanate component; and (a4) 0-8 wt.% mono-, di- and/or tri-functional substance with OH and/or amino gps. Also claimed is the prodn. which involves introducing the various auxiliaries or additives for (A) prior to polyisocyanate (B), such introduction being by simple stirring such that rather special appts. nor a further viscosity adjustment is required.

76. Hydrophobating aqueous composition and its use as an interior or exterior **coating** formula. | EP0561668 | 1992-03-20 | RHODIA CHIMIE* | 1993-09-22 | 1993-09-22

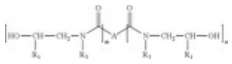
Aqueous composition for imparting water repellency, based on a latex of a film-forming organic polymer (A), of an unreactive polyorganosiloxane (B), of an alkali metal alkylsiliconate (C), of **pigments** and/or various **fillers**, with an A/B weight ratio expressed on dry basis of 40/60 to 90/10 and a **pigment** volume concentration of 10 to 90. It can be employed for obtaining **coatings** for imparting water repellency to various external or internal surfaces.

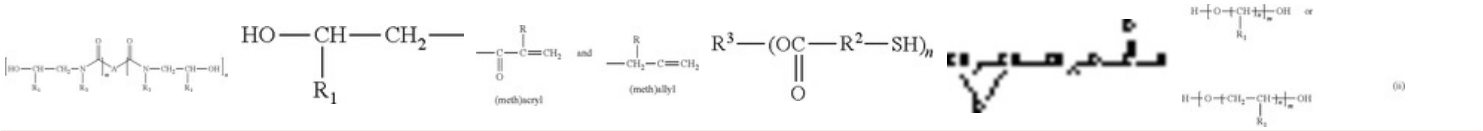
77.	Process for the manufacture of products based on hydraulic **binder**, especially based on fibre-**cement**.	ATA205185	1985-07-10	AMETEX ETERNIT FINANCIERE* ETERNIT WERKE HATSCHEK L	1986-07-15	1986-07-15

Process for manufacturing products based on hydraulic **binder**, in particular sheets or shaped products made of fibre-**cement**, based, for example, on asbestos or cellulose fibres, during the manufacture of which a dispersion of paraffin wax is deposited onto the latter; and corresponding products. According to the invention a dispersion of paraffin wax, preferably nonionogenic, which has a paraffin wax concentration of 25 to 55 % by weight, while the paraffin wax used has a softening point of between 65 and 100 DEG C, more particularly of at least 80 DEG C, is deposited onto the products which are provided, if appropriate, with a finishing seed bed based on tinted hydraulic **binder**.

78.	Curable film-forming compositions containing photothermally active materials, **coated** metal substrates, and methods of **coating** substrates	CA2983753	2016-05-02	PPG INDUSTRIES*	2016-11-17	2016-11-17

A curable film-forming composition is provided, comprising: (a) a curing agent comprising reactive functional groups; (b) a compound comprising functional groups reactive with the reactive functional groups in (a); and (c) a photothermally active material. The composition may further include a catalyst component. **Coated** substrates are also provided using the compositions described, as well as methods for **coating** a substrate using the compositions.



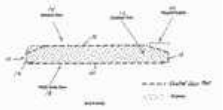


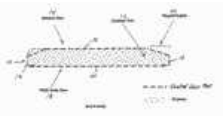
79.	Use of radiation-curable compositions for **coating** mineral bodies	NO983477	1997-07-29	BASF*	1998-07-28	1998-07-28

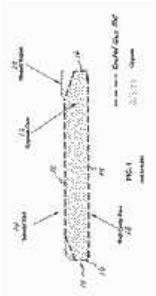
The use of radiation-curable preparations contains polymer(s) P1 with ethylenic double bonds for **coating** moulded products containing mineral **binders** (mineral mouldings). Also claimed is (i) a process for the production of **coated** mineral mouldings by applying this type of preparation to the surface of a moulded product, possibly removing any solvent, and hardening with UV or electron beam radiation; (ii) **coated** mineral mouldings obtained by this process.

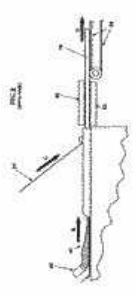
80.	Interior wallboard and method of making same	WO2005040475	2004-10-05	ASHLEY DREW & NORTHERN RAILWAY BLUE RAPIDS RAILWAY BLUEYELLOW BROWN BOARD HOLDING BRUNSWICK CELLULOSE BRUNSWICK PULP LAND CECORR COLOR BOX CP & P DIXIE CONSUMER PRODUCTS DELAWARE LIABILITY DZHI PI DZHIPSUM ENCADRIA STAFFING SOLUTIONS FORT JAMES FORT JAMES CAMAS FORT JAMES GREEN BAY FORT JAMES INTERNATIONAL FORT JAMES MAINE FORT JAMES NORTHWEST FORT JAMES OPERATING G P OREGON GEE PEPPERM GEORGIA PACIFIC GEORGIA PACIFIC CHEMICAL GEORGIA PACIFIC CHILDCARE CENTER GEORGIA PACIFIC CONSUMER PRODUCTS GEORGIA PACIFIC CORRUGATED DELAWARE LIABILITY GEORGIA PACIFIC DELAWARE PARTNERSHIP GEORGIA PACIFIC GYPSUM* GEORGIA PACIFIC INVESTMENT GEORGIA PACIFIC RESINS GEORGIA PACIFIC WOOD PRODUCTS DELAWARE LIABILITY GLOSTER SOUTHERN RAILROAD GP CELLULOSE ZUG SWITZERLAND LIABILITY GREAT NORTHERN NEKOOSA GREAT SOUTHERN PAPER KMHC KOCH CELLULOSE KOCH CELLULOSE AMERICA MARKETING KOCH FOREST PRODUCTS HOLDING KOCH RENEWABLE RESOURCES KOCH WORLDWIDE INVESTMENTS LEAF RIVER CELLULOSE LEAF RIVER FOREST PRODUCTS MILLENNIUM PACKAGING SOLUTIONS NEKOOSA PACKAGING NEKOOSA PAPERS OLD AUGUSTA RAILROAD OLD PINE BELT RAILROAD PHOENIX ATHLETIC CLUB PRIM SOUTHWEST MILLWORK & SPECIALTIES TOMAHAWK LAND WEST GEORGIA MANUFACTURING XRS	2005-05-06	2005-05-06

A gypsum wallboard suitable for Level 4 finishing having a **coated** non-woven glass **fiber** mat facing material where the glass **fiber** mat has a majority of fibers of a **fiber** diameter between 8 and 11 microns and a **fiber** length between 1/4and3/4 inch and preferably between 1/4 and 1/2inch and preferably has a basis weight between about 0.8 lb./100 ft.<2> and about 2.2 lb./100, and wherein the fibers in the non-woven glass **fiber** are bound together with an acrylic adhesive **binder** and wherein the non-woven glass mat has a **coating** of a dried aqueous mixture of (i) a mineral **pigment**, (ii) a polymer latex adhesive **binder** and optionally (iii) an inorganic adhesive **binder** such that the **coated** non-woven glass mat facing material has a porosity which allows water to evaporate through said **coated** mat from the gypsum core during preparation of the wallboard.



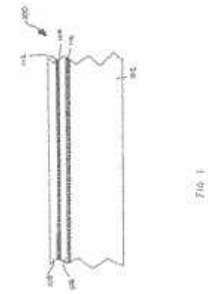


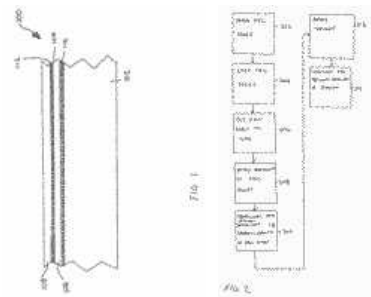




81.	A **coated** substrate having one or more cross-linked interfacial zones	WO2007022449	2005-08-18	JAMES HARDIE* JAMES HARDY INTERNATIONAL FINANCE BETH ROTTEN FEN NOTE SHOP	2007-02-22	2007-02-22

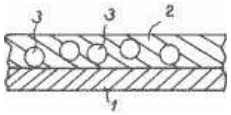
A **coated** substrate is configured with one or more cross-linked interfacial zones provided to improve the adhesion between the **coating** and substrate of the article or between adjacent **coating** layers. The **coating** composition contains molecules having at least two reactive functional groups capable of reacting with cross-linking molecules in the substrate and/or molecules in adjacent **coating** layers. The cross-linked interfacial zones improve the adhesion- between **coatings** and the substrate and between adjacent **coating** layers.

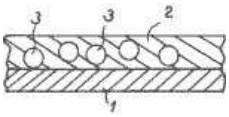




82.	Agents for producing self-cleaning thin surface **coatings** and methods suited therefor	WO200119932	1999-09-15	GROS GEORG	2001-03-22	2001-03-22

The invention relates to a method for producing self-cleaning surface **coatings**, whereby an inventive **coating** agent dispersion or solution is applied with a thin **coat** to the surface and is dried thereon. Said **coating** agent dispersion or solution is comprised of: a) a film-forming plastic provided in the form of an aqueous dispersion or of a solution in an organic solvent; b) a hydrophobic polymer provided in the form of a powder with an average grain size ranging from 10-50 mu m, which is insoluble in the above-mentioned solvent; c) a sufficient quantity of water and/or of an organic solvent for producing a **coating** agent that is capable of being spread or sprayed; d) whereby the applied layer is so thin that the grains of the hydrophobic polymeric powder are interspaced by a distance of 5 to 100 mu m, and e) whereby the quantity of the film-forming plastic is measured so that it forms a layer after the solvent evaporates whose thickness is equal to 30-60 % of the average grain size of the hydrophobic powder.





Inhaltsstoffe	Anteile Rezeptur 1	Anteile Rezeptur 2	Anteile Rezeptur 3	Anteile Rezeptur 4
Acrylatdispersion	6,25	6,25	6,75	4,50
PU-Dispersion (elastisch)	0,50	0,50	0,50	0,50
Paraffinwachs (voltraffiniert)	3,75	3,75	3,75	6,25
Polsilosan (aminofunktionell)	0,75	-	-	-
Verfilmungshilfsmittel	2,50	2,50	2,50	2,50
Tropfkonservierung	0,05	0,05	0,05	0,05
Verdickungsmittel	0,40	0,40	0,40	0,40
Entschäumer (Mineral0)	1,00	1,00	1,00	1,00
Flüssige Fluorverbindungen	1,00	2,50	1,50	1,00
Silicon0	0,25	-	-	-
Farbpigmente	1,50	1,50	1,50	1,50
Mattierungsmittel (thermische Kieselsäure)	1,75	1,75	1,50	1,50
Antiabsetzmittel (hydrophobe Kieselsäure)	0,50	0,50	0,50	0,50
Teflon (Teilchengröße 15-25 µ)	4,00	4,00	4,00	4,00
Netzmittel	1,00	1,00	1,00	1,00
Wasser	14,80	14,80	15,05	15,30

Fig.1

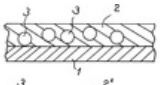


Fig.2

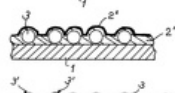
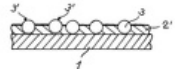
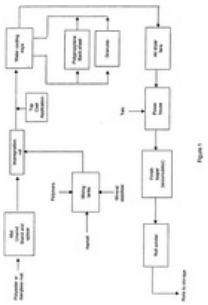


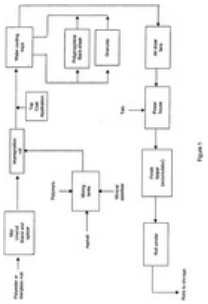
Fig.3



83. Process for **coating** modified bitumen membranes using powder **coatings** | US20050261409 | 2004-05-21 | BMCA ACQUISITION
BMCA ACQUISITION SUB
BMCA FRESNO
BMCA FRESNO II
BMCA GAINESVILLE
BMCA INSULATION PRODUCTS
BMCA QUAKERTOWN
BUILDING MATERIALS INVESTMENT
BUILDING MATERIALS
MANUFACTURING
DUCTWORK MANUFACTURING
GAF BUILDING MATERIALS
GAF LEATHERBACK
GAF MATERIALS
GAF MATERIALS INVEST*
GAF PREMIUM PRODUCTS
GAF REAL PROPERTIES
GAFTECH
HBP ACQUISITION
LL BUILDING PRODUCTS
PEQUANNOCK VALLEY CLAIM
SERVICE
SOUTH PONCA REALTY
WIND GAP REAL PROPERTY
ACQUISITION | 2005-11-24 | 2005-11-24

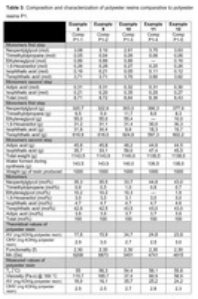
A method of applying a powder **coating** composition during manufacture of modified bitumen roll roofing membranes, is provided. The **coating** composition is heat 5activated providing greater adherence to surfaces that it applied to, and greater reflective properties. The **coating** that has an initial energy efficiency rating greater than or equal to 0.65 for a low-sloped roof, or an initial energy efficiency greater than or equal to 0.25 for a steep-sloped roof.

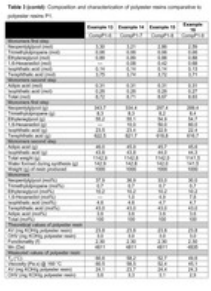


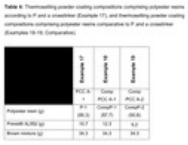


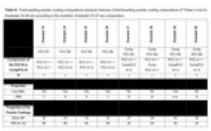
84. Matt powder **coatings** | WO2016012252 | 2015-07-09 | DSM*
DSM IP ASSETS | 2016-01-28 | 2016-01-28

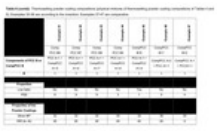
The invention relates to a thermosetting powder **coating** composition B (PCC B) comprising a physical mixture of a thermosetting powder **coating** composition A (PCC A) with a separate, distinct thermosetting powder **coating** composition A1 (PCC A1). The invention further relates to a process for making said thermosetting powder **coating** composition B and processes for **coating** an article with said PCC B. The invention further relates to a cured PCC B. The invention further relates to an article having **coated** thereon said thermosetting powder **coating** composition B as well as to an article having **coated** and cured thereon said thermosetting powder **coating** composition B. The invention further relates to use of: the PCC B, the cured PCC B, articles **coated** with the PCC B, articles having **coated** and cured thereon the PCC B. The invention further relates to the use of the PCC B for matt powder **coatings**.

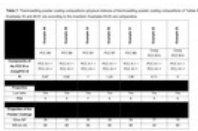


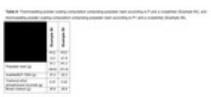






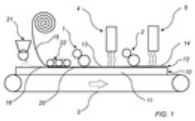


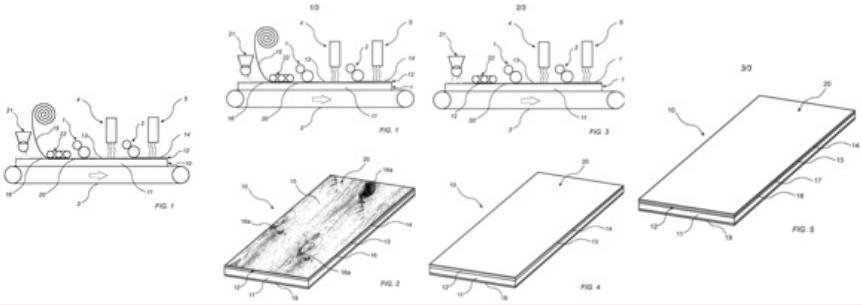




85. A method to **coat** a building panel and such a **coated** building panel | WO2018034614 | 2017-08-18 | VÄLINGE INNOVATION* | 2018-02-22 | 2018-02-22

The present disclosure relates to a method to at least partially **coat** a building panel (10), including applying a first **coating** composition on a building panel (10) having a surface (20) comprising at least portions including amino resins, for forming a first **coating** (13) on at least said portions of said surface (20), wherein the first **coating** composition has a glass transition temperature (Tg) less than 30°C and reactive portions, applying a second **coating** composition on at least portions of the first **coating** (13) for forming a second **coating** (14), wherein the second **coating** composition comprises reactive portions adapted to react with the reactive portions of the first **coating** (13). The disclosure also relates to such a **coated** building panel (10).



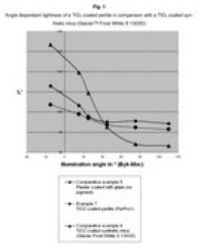


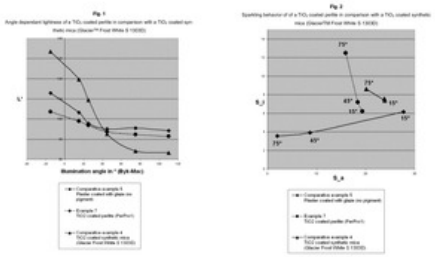
86. Waterborne heat-insulating flame-retardant multifunctional nano **coating** and preparation method thereof | CN101824270 | 2010-04-30 | CHANGSHA XINKAI CHEMICAL* | 2010-09-08 | 2010-09-08

The invention relates to a waterborne heat-insulating flame-retardant multifunctional nano **coating** and a preparation method thereof. The **coating** consists of the following components in part by weight: 48 to 52 parts of waterborne resin and 30 to 50 parts of nano **pigment fillers** (nano titanium dioxide, nano titanium dioxide-**coated** hollow glass microspheres, nano titanium dioxide-**coated** hollow ceramic microspheres and nano antimony-doped tin dioxide (ATO) particles), size and auxiliary materials such as film-forming additive and coupling agent. The preparation method includes the steps that: the nano **fillers** and the size are first dipped into the waterborne resin, the auxiliary materials are then sequentially added and stirred, and thereby the heat-insulating flame-retardant multifunctional nano **coating** is obtained. The processing technique is simple, the component proportion is reasonable, and the prepared **coating** has the advantages of high heat resistance, high reflectivity, high radiative heat conductivity, certain fire resistance, high-efficient heat insulation, excellent mechanical and chemical properties, environment-friendliness, stain resistance, flame retardance and energy saving. The **coating** can be **coated** on outside facilities such as outer walls and building roofs.

87. Use of perlite based effect **pigments** for finishes with antique, or patina appearance | US20120027993 | 2011-07-26 | BASF* | 2012-02-02 | 2012-02-02

The present invention provides a process for imparting a simulated patina, or antique appearance to a substrate by using a **coating** composition comprising a perlite based effect **pigment**. The perlite based effect **pigment** functions as colorant and matting agent and shows an almost angle independent brightness. The process provides, for example, decorative wall **coatings** showing enhanced antique, or patina effects as compared to conventional effect **pigments** on basis of mica.





88. Preparation of radiation curable **binders** | CA2518139 | 2004-09-09 | ALLNEX IP
ALLNEX IP S Ã** R L*
ALLNEX NETHERLANDS*
BAYER MATERIALSCIENCE | 2006-03-09 | 2006-03-09

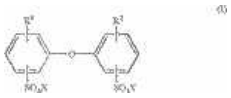
A **binder** is prepared by reacting at temperatures below 130[deg]C: NCO-functional compound(s) containing uretdione groups; with compound(s) bearing isocyanate reactive groups and groups that react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation; and then with other saturated, hydroxyl-containing compound(s); in the presence of a catalyst. Preparation of a **binder** containing allophanate groups, groups that react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation (radiation-curing groups) and optionally NCO-reactive groups, comprises reacting at temperatures below 130[deg]C: (a) NCO-functional compound(s) bearing uretdione groups; with (b) compound(s) having both isocyanate reactive groups and groups that react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation (radiation-curing groups); and then with (c) saturated, hydroxyl-containing compound(s) other than (b), at least one of these compounds having an hydroxyl functionality greater than 2 (the reaction with such compounds taking place at least proportionally with the formation of allophanate groups); in the presence of (d) a catalyst containing ammonium salt(s) or phosphonium salt(s) of aliphatic or cycloaliphatic carboxylic acids. Independent claims are also included for: (1) a **binder** prepared by the inventive process; and (2) a **coating** composition comprising: (A) **binder**(s); (B) optionally polyisocyanate(s) containing free or blocked isocyanate groups and optionally containing groups which react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation; (C) optionally compounds other than (A) bearing groups which react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation and optionally having NCO-reactive groups; (D) optionally isocyanate-reactive compound(s) free from groups which react with ethylenically unsaturated compounds with polymerization on exposure to actinic radiation; and (E) initiator(s); and (3) a substrate **coated** with a **coating** obtained from the radiation-curing **binder** containing allophanate groups (1).

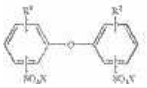
89. A method of **coating** an uncured mineral substrate | GB9826868 | 1998-12-05 | LAFARGE BRAAS*
ROHM & HAAS* | 1999-01-27 | 1999-01-27

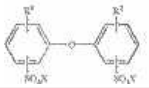
A high gloss **coating** on a mineral substrate, such as a roof tile or floor tile, can be achieved by a method comprising: i) applying a first **coating** consisting of an aqueous composition comprising a film forming polymeric **binder** to a surface of the uncured substrate; ii) exposing said first **coating** to hot air or infrared, ultraviolet or microwave radiation, for sufficient time for at least the surface of said **coating** remote from the substrate body to form a film of polymeric **binder**, and iii) applying a second **coating** consisting of an aqueous composition comprising a film forming polymeric **binder** on top of the first **coating**. After application of the second **coating**, the substrate and **coatings** are dried and cured, for example in an oven or autoclave.

90. Use of aqueous preparations containing a copolymer p as a film forming component | NO985213 | 1997-11-10 | BASF* | 1998-11-09 | 1998-11-09

An aqueous composition (I) containing a copolymer (II), formed of ethylenically unsaturated monomers, as a film forming component, is used for **coating** mineral based molded articles. The copolymer (II) has a glass transition temperature of 25-80 degrees C and the monomer contains 0.2-5.0 wt.% itaconic acid. Independent claims are included for: (i) the production of **coated**, mineral molded articles by application of (I) onto at least one surface of the article and drying; and (ii) the resulting **coated**, molded article.







91. Stain resistant, soft touch **coating** compositions and **coatings** formed therefrom | CA2988004 | 2016-06-09 | PPG INDUSTRIES* | 2016-12-15 | 2016-12-15

A stain resistant, soft touch **coating** composition can include: (a) a fluoropolymer comprising at least one reactive functional group; (b) a polyester polyol; and (c) a crosslinker reactive with (a) and (b). The polyester polyol can include a reaction product obtained from a mixture of reactants including: an aliphatic diol; a polyol having 3 or more hydroxyl groups; and a cyclic polycarboxylic acid, or an anhydride or ester thereof.

LUMIFLON® LUMIFLON® ZEFFLE® DESMODUR® DESMODUR® DESMODUR® DESMODUR® DESMODUR® CYMEL® CYMEL® CYMEL® CYMEL®

92. Stain resistant **coating** compositions and **coatings** formed therefrom | CA2987999 | 2016-06-09 | PPG INDUSTRIES* | 2016-12-15 | 2016-12-15

A stain resistant **coating** composition can include: (a) a polyester polyol; (b) a silicone component having at least one reactive functional group; and (c) a crosslinker reactive with (a) and (b). The polyester polyol can include a reaction product obtained from a mixture of reactants including: an aliphatic diol; a polyol having 3 or more hydroxyl groups; and an aliphatic cyclic polycarboxylic acid, or an anhydride or ester thereof, that is greater than 10 mole % of the total carboxylic acids, or anhydrides or esters thereof, used to prepare the polyester.

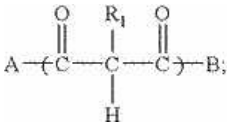
BYK® BYK® DESMODUR® DESMODUR® DESMODUR® DESMODUR® CYMEL® CYMEL® CYMEL® CYMEL® CYMEL®

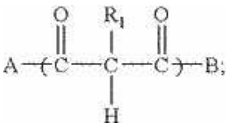
93. Waterborne crosslinkable compositions | CA2191416 | 1996-11-20 | ROHM & HAAS* | 1997-06-05 | 1997-06-05

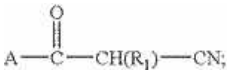
Disclosed are aqueous, storage-stable, crosslinkable polymer compositions comprising: (a) an aqueous dispersion of a an acrylic polymer component containing certain carbonyl-containing functional-groups; (b) a nitrogen-containing compound having at least two carbonyl-reactive nitrogen groups; and (c) optionally, co-solvents, **pigments**, **fillers**, dispersants, wetting agents, antifoam agents, UV absorbers, antioxidants, biocides, and stabilizers. Such compositions are useful as **coatings** or **binders** in **coating** compositions, or as adhesives.

94. Dirt pickup resistant **coating binder** having high adhesion to substrates | BRPI0701286 | 2007-03-19 | ROHM & HAAS* | 2007-07-24 | 2007-07-24

An aqueous composition that contains an aqueous dispersion of a copolymer of (i) 95-98% by weight of one or more monoethylenically unsaturated monomer; and (ii) 2-5% by weight of a beta-dicarbonyl monomer or cyanocarbonyl monomer, which may be in the enamine form, whereby the beta-dicarbonyl monomer or cyanocarbonyl monomer (ii) is added by staged feed of the said monomer during the second half, by weight, of the feed of monomers (i); and a photoinitiator present in the range of 0.1-1% by weight based upon the total weight of copolymer.





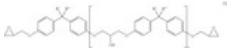


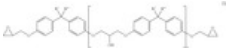
95. Hydraulic **cementitious** compositions reinforced with fibers containing polymerized polyacrylonitrile | EP0271825 | 1986-12-18 | ALLIED UNION* BASF SOLUTIA* | 1988-06-22 | 1988-06-22

A reinforced hydraulic **cementitious** composition containing a fibrous material comprising a homopolymer of acrylonitrile or a copolymer of acrylonitrile having a molar concentration of acrylic nitrile monomer units in the range of from about 98 percent to about 100 percent which has a denier in the range of from about 1 to about 25 and a length of from about 0.15 inch to 1 inch.

96. Epoxy resin hardened **cementous** compositions in the form of a **coating** or sealing | EP2826761 | 2013-07-16 | SEEKER TECHNOLOGY SIKA TECHNOLOGY* | 2015-01-21 | 2015-01-21

A multicomponent composition is described, comprising A) a **binder** component (A) comprising at least one epoxy resin, B) an aqueous hardener component (B) comprising at least one amine compound as amine hardener and water and C) a solid component comprising at least one hydraulic inorganic **binder**, preferably **cement**, wherein the multicomponent composition, based on the total weight, comprises at least 8% by weight of organic **binder**, where the total amount of epoxy resin and amine hardener constitutes the organic **binder**. The multicomponent composition preferably comprises at least one **pigment** as colorant. The multicomponent composition is of outstanding suitability for production of floor **coatings** or seals, which can be produced in a great variety of hues.





97. Stain blocking water borne **coating** composition | WO2005071023 | 2005-01-21 | AKZO NOBEL NUCLEAR POWER INDUSTRY RESIN NUPLEX RESINS* WESTPAC BANKING* | 2005-08-04 | 2005-08-04

The invention relates to a stain blocking water borne **coating** composition, preferably for clear **coats**, comprising an organic **binder** and as stain blocking agent at least one type of inorganic nano-particles having a layered structure and a crystal structure with positively charged layers. Further, the invention relates to a method for **coating** a substrate comprising water extractable staining agents wherein the substrate is **coated** with an organic water borne **coating** composition comprising as stain blocking agent at least one type of inorganic nano-particles, preferably having a layered structure and a crystal structure with positively charged layers and to **coated** substrates obtainable by this method.

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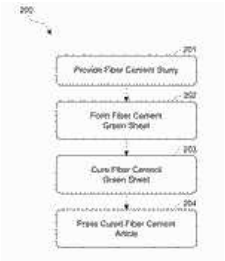
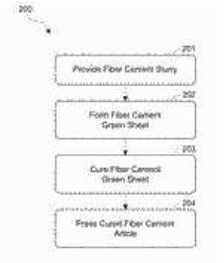
98. **Fiber cement** articles with ultra-smooth exterior surface and methods for manufacturing same | US20180291634 | 2018-03-30 | JAMES HARDIE* | 2018-10-11 | 2018-10-11

Described herein are **cementitious** articles having an integrally formed exterior surface with ultra-smooth finish and reduced porosity and/or thickness relative to the core of the **cementitious** article. Described herein are also techniques and methods for producing **fiber cement** articles having a thin exterior shell characterized by improved smoothness and reduced porosity.





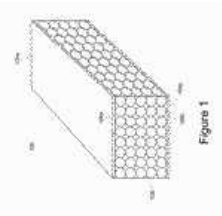


Figure 1

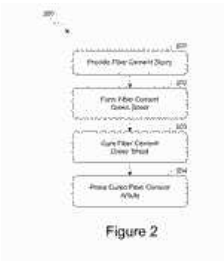
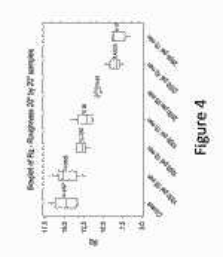


Figure 2

Figure 3



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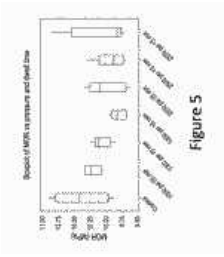

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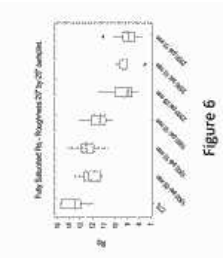

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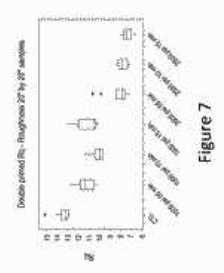

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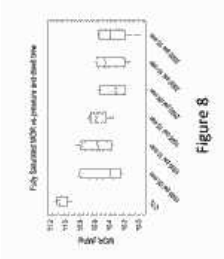


Figure 8

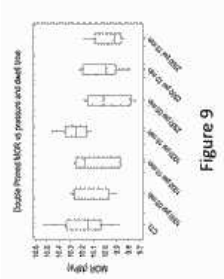
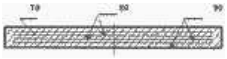
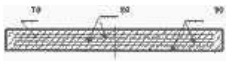


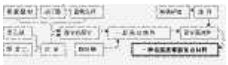
Figure 9

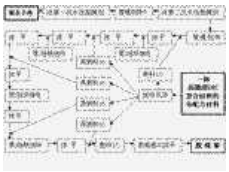
99. Preparation methods of high-strength glass-**fiber** reinforced **cement** (grc) composite material and high-strength xj composite material, high-strength grc composite material well-cover, and high-strength grc-supported xj composite material wel... | CN102432253 | 2011-09-22 | GE DAWANG | 2012-05-02 | 2012-05-02

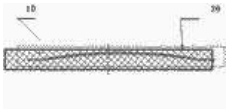


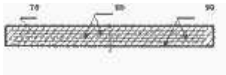
The invention provides preparation methods of a high-strength glass-**fiber** reinforced **cement** (GRC) composite material and a high-strength XJ composite material, a high-strength GRC composite material well-cover, and a high-strength GRC-supported XJ composite material well-cover. Compared with the existing nonmetal composite materials, in manufacture of a well-cover and a water grate, the high-strength GRC composite material and the high-strength XJ composite material provide a large technical breakthrough and innovation. The high-strength GRC composite material well-cover and the high-strength GRC-supported XJ composite material well-cover have strong bearing capabilities, high impact strength, good aging resistance, tear resistance, high wear resistance, high corrosion resistance, obvious damping effects, long service lives and high cost performances, make an important contribution to realize application of a nonmetal material in manufacture of a well-cover, can be massively popularized and used for inspection wells on urban streets, roads and highways, and have good application prospects.

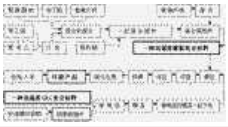












100. Preparation of multicoat paint for metal and plastic substrate | DE19750451 | 1997-11-14 | HERBERTS* | 1999-05-27 | 1999-05-27

Preparation of multicoat paint for metal and plastic substrates comprises applying a base paint on an optionally pretreated substrate, where the base paint is the sealing layer and comprises: (A) a physically dried, water dilutable, OH-free polyurethane(s) as an aqueous dispersion; (B) a water dilutable, OH-functional polyacrylate, polyester and/or polyurethane as an aqueous dispersion; (C) a polyisocyanate(s); and (D) **fillers**, **pigments** and/or other additives and aids. The ratio of NCO groups in (C):OH groups in (B) is 1:5-5:1.