An integral composite building material is provided that includes a three-dimensional, corrosion-resistant fabric that is pre-attached to a weather barrier. The invention also provides a building wall and exterior finishing system including the composite building material. The invention further includes a method for constructing a building wall including the exterior finishing system.
COMPOSITE BUILDING MATERIAL

BACKGROUND

[0001] The invention relates to a composite building material that can be used in new construction and renovation. More particularly, the invention relates to a composite building material that provides a weather resistant barrier and that facilitates the attachment or adherence of exterior finishing materials, such as stucco, to the exterior surfaces of building walls.

[0002] Modern techniques for constructing the walls of buildings may take numerous forms. Among these is the two-by-four (2×4) framed construction. Conventional 2×4 wall construction begins with framing of the walls with wood or steel members. These wood or steel members typically have nominal dimensions of 2"×4" and are, therefore, called “two-by-four” or 2×4. These 2×4s are oriented vertically and spaced at intervals generally either 16" or 24" and are each connected at the top and bottom to similar members horizontally oriented. This structure is referred to in the relevant art as a “framed” wall.

[0003] A sheet of sheathing such as plywood or other material is then often applied to the exterior of the framed wall, but may not be required in all circumstances. Such requirements are typically established by local governmental building codes. A weather barrier is then typically applied to the exterior surfaces of the sheathing, with an exterior wall covering or exterior finishing materials being applied directly over the weather barrier.

[0004] With respect to the exterior wall covering or finishing materials, many materials may be used such as brick, stucco, exterior insulation and finish systems (EIFS), vinyl siding, aluminum siding, and wood siding.

[0005] If stucco is to be utilized as the exterior finishing materials of the building wall, then a metal lath or wire mesh is typically used to provide adherence of the stucco to the exterior of the building wall. The metal lath or wire mesh is typically attached to the building wall substrate over the weather barrier. At least one layer of stucco material is then applied to the lath or wire mesh by brushing, rolling, spraying, or troweling.

[0006] While the metal lath and wire mesh products provide adequate mechanical strength to support the weight of wet stucco, and to prevent the sloughing or sagging of the stucco, these products are not without disadvantages. One particular disadvantage to the use of metal lath or wire mesh products is that they can corrode upon exposure to water. Particularly along coastal regions, water may penetrate the exterior stucco layer or other components of the wall assembly; and come into contact with the metal lath or wire mesh, causing rusting and corrosion of the metal lath or wire mesh. The corrosion of these products results in aesthetic blemishes, such as rust spots, and discoloration of the exterior surfaces of the stucco finish layer. Furthermore, the rusting or corrosion of the metal lath and wire mesh products may result in lessening of the ability of the lath or mesh to support the stucco layer(s), thereby effectively decreasing the service life of the exterior finishing system.

[0007] Another potential drawback to the use of metal lath and wire mesh products is that dangerous tools, such as heavy duty wire cutters or tin snips, are required to cut these products. The use of these tools present occupational hazards for the construction worker or tradesman.

[0008] A further disadvantage to the use of metal lath and wire mesh products is that they are difficult to handle and install. Metal lath and wire mesh products are rigid and can stretch during installation, thereby causing irregular and non-uniform installation of the exterior finishing system. The metal lath and wire mesh products have sharp edges which are inconvenient and can pierce or penetrate the gloves and flesh of the construction worker, thereby posing a risk of injury.

[0009] Still another disadvantage to the use of metal lath and wire mesh products that is they generally have a high coefficient of thermal expansion. The high coefficient of thermal expansion of these metal products can cause distortion in the shape of the lath or mesh, which, in turn, induces stress in the stucco finishing layer.

[0010] In the building and construction industry, the installation of a metal lath or wire mesh to the exterior surface of a weather barrier is typically carried out in a second construction step. The weather barrier is attached to the exterior surfaces of the building wall substrate by a first installation operation. Thereafter, the metal lath or wire mesh product is installed over the previously installed weather barrier. Such a second operation requires at least as much time and effort as is required to install the weather barrier to the building wall substrate. Thus, the installation of a lath or wire mesh requires significant added effort in the construction process. Moreover, as building materials typically arrive at a construction site in a tightly scheduled and ordered fashion, the installation of a lath or wire mesh over a weather barrier results in an additional step which must be planned and executed according to schedule, otherwise construction procedures scheduled thereafter may be delayed.

[0011] Due to the shortcomings and disadvantages inherent in the known metal lath products and installation methods, the need still exists in the art for an improved building material to be used in conjunction with stucco applications, which is corrosion resistant, and easy and economical to install.

SUMMARY

[0012] An integral composite building material is provided, said integral composite building material comprises a weather barrier and a corrosion resistant, three-dimensional lath of non-metal fibers attached to said weather barrier.

[0013] According to certain embodiments, the integral composite building material comprises a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers attached to said weather barrier.

[0014] A building wall is also provided, said building wall comprising a substrate and an integral composite building material attached to said substrate, said integral composite building material comprising a weather barrier and a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier.

[0015] According to certain embodiments, the building wall incorporates an integral composite building material comprising a weather barrier and a corrosion-resistant,
woven, three-dimensional fabric of non-metal fibers attached to said weather barrier.

[0016] An exterior finishing system is further provided, said system comprising an integral composite building material comprising a weather barrier and a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier, and exterior finishing materials applied over said integral composite building material.

[0017] According to certain embodiments, the exterior finishing system incorporates an integral composite building material comprising a weather barrier and a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers attached to said weather barrier, and exterior finishing materials applied over said integral composite building material.

[0018] A method of constructing a building wall is further provided, said method comprising attaching an integral composite building material comprising a weather barrier and a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier to a building wall substrate.

[0019] According to certain embodiments, the method of constructing a building wall includes attaching an integral composite building material to a building wall substrate, the integral composite building material comprising a weather barrier and a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers attached to said weather barrier.

[0020] A method of constructing a stucco system is further provided, said method comprising optionally disposing an insulation layer over a building wall substrate, attaching an integral composite building material over said substrate or over said insulation, if an insulation layer is present, said integral composite building material comprising a weather barrier and a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier, and applying at least one stucco layer over said integral composite building material.

[0021] According to certain embodiments, the method of constructing a stucco system includes attaching an integral composite building material to a building wall substrate, or to an insulation layer if present, the integral composite building material comprising a weather barrier and a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers attached to said weather barrier.

DETAILED DESCRIPTION

[0027] An integral composite building material is provided. The term "integral composite weather barrier" refers to a building material that includes a building code approved weather barrier and a three-dimensional lath of non-metal fibers that is pre-attached to the weather barrier to form a unitary building material. The lath may be a woven fabric that is attached to a surface of the approved code weather barrier. The fabric is corrosion-resistant and has an increased thickness, thereby providing a fabric having an in plane three-dimensional shape or configuration, when viewed from the side or end of the fabric. The use of the integral composite weather barrier avoids the need to attach weather barriers and laths to a building structure in separate steps at a job site.

[0028] An illustrative embodiment of the integral composite building material is shown in FIGS. 1-3. FIGS. 1-3 show a woven, three-dimensional fabric lath attached to a weather barrier. It should be noted, however, that it is not required that the lath comprise a woven fabric. Any three-dimensional lath structure that is capable of accepting and supporting the weight of wet exterior finishing materials, such as stucco or EIFS base coats and finish coats, may be pre-attached to the weather barrier to form the integral composite building material. Additional fabric types that may be utilized in the integral composite building material include knitted and braided cloths and fabrics.

[0029] Integral composite building material 10 includes a weather barrier 11 and, attached to the weather barrier 11, a woven fabric 12. Integral composite building material 10 is intended to be utilized in the construction and renovation of walls of buildings and is intended to supplant the separate installation of individual weather barriers and lath components.

[0030] Weather barrier 11 may be any conventional weather barrier that is used in building, construction, and renovation. According to certain embodiments, the weather barrier 11 may include well known and industry accepted building papers or tar papers. Weather barrier 11 is a building code recognized product which is typically sold on a roll. Weather barrier 11 resists the transmission of water therethrough and controls the transmission of moisture vapor therethrough. Without limitation, an example of a suitable weather barrier which is well known in the art is Jumbo Tex® Vapor Permeable Weather Resistant Barrier manufactured by Fortifiber® Corporation of Incline Village, Nev., although other similar building papers are well known and used in the relevant art.

[0031] According to other embodiments, the weather barrier 11 may comprise a polymeric sheet material. The weather barrier 11 may be comprised of a non-woven sheet of polymeric fibers, such as polyolefin fibers. Without limitation, the polyolefin fibers that are useful in the preparation of the weather barrier 11 may be selected from polypropylene fibers and high density polyethylene fibers. A useful weather barrier 11 comprises a non-woven sheet of spun-bonded high density polyethylene fibers.

[0032] Non-woven sheets of spun-bonded high density polyethylene fibers are commercially available from E.I. DuPont de Nemours & Co., Inc. (Wilmington, Del.) under the trademarks Tyvek® HomeWrap™, Tyvek® StuccoW-
rap™ and Tyvek® CommercialWrap™. The non-woven structure provides excellent resistance to water and air penetration. In addition, the non-woven structure has excellent strength and tear resistance.

Additionally, non-woven sheets of spun-bonded high density polyolefin fibers are commercially available from Reemay, Inc. (Old Hickory, Tenn., USA) under the trademark TYPAR® HOMEWRAP™. The non-woven structure provides high strength and tear resistance, and provides excellent resistance to water and air penetration. The polymeric sheet material substantially prevents intrusion of air and water, but permits moisture vapor to escape from the building structure.

As described above, a woven fabric having an increased thickness is pre-attached to a surface of a building code approved weather barrier. Still referring to FIGS. 1-3, the woven fabric 12 has an open, three-dimensional configuration. Woven fabric 12 is manufactured from non-metal fibers. Suitable non-metal fibers include, but are not limited to, polymer fibers, inorganic fibers, and combinations thereof. The inorganic fibers may include glass fibers. Glass fibers may be used to manufacture the woven fabric 12, and include E-glass fibers, A-glass fibers, ECR-glass fibers, S-glass fibers, and AR-glass fibers. Suitable polymeric fiber materials that can be used to manufacture woven mat 12 include, but are not limited to, polyolefin fibers, such as polypropylene and high density polyethylene fibers, polyvinylchloride fibers, polystyrene fibers, polyamide fibers, and polyester fibers.

Certain fibers of the woven fabric 12 form an undulating or sinusoidal pattern in at least one direction. This undulating pattern forms a repeating peak and valley structure undulating in the longitudinal and/or transverse directions, to provide a woven fabric 12 with an in plane increased thickness and thereby three-dimensional shape. Due to spacing of the fiber strands that comprise the woven fabric, the fabric 12 has a grid-like pattern that contains openings or voids, which can accept, hold, and support a desired amount of exterior finishing materials, such as stucco materials.

Prior art stucco systems utilize wire mesh or metal lath products to accept and hold the stucco finishing materials to the building wall. The use of the integral composite building material including a lath of corrosion-resistant fibers eliminates rusting and discoloration problems that can be associated with the use of wire mesh or metal lath in stucco applications.

The fabric 12 has a crush resistance allowing for application of wet exterior finishing materials, such as wet stucco, without significant deformation of the fabric 12. The fabric 12 also possesses sufficient tensile strength to support the weight of wet stucco materials applied to it, without sagging. The tensile strength of the fabric 12 should be sufficient to support the weight of stucco materials that are applied to the lath at a weight of six pounds/square foot. The fabric 12 additionally possesses chemical resistance, such as alkaline resistance, which makes it useful in connection with exterior finishing systems employing stucco finishing layers or other alkaline, cementitious-based finishing materials.

The fabric lath 12 may have a thickness of at least ½ inch or greater. The openings of the lath should be sufficient to accept and hold the weight of wet exterior finishing materials, such that the exterior finishing materials can “key” around the lath. According to certain embodiments, the openings of the fabric lath 12 may not be greater than 1.5 inches in any direction. According to alternative embodiments, the openings of the fabric lath 12 may not be greater than 1 inch in any direction. It should be noted, however, that the dimensions of the openings of the fabric lath 12 can be tailored to any application. Thus, the dimensions of the openings of the fabric lath 12 may be larger or smaller, depending upon the specific application and exterior finishing materials used in the application. In any case, the fabric lath 12 should have a sufficient chemical resistance, mechanical strength (both tensile and compressive), and opening size to support a layer of wet exterior finishing materials that is applied to at least a thickness of ½ inches or greater.

The woven fabric 12 is attached to weather barrier 11. Both weather barrier 11 and woven fabric 12 are elongated strips resulting in composite 10 being in strip form and having a longitudinal axis. The joined weather barrier 11 and woven fabric 12 form a single unitary integral composite 10, which is easily placed in roll form typically for transport to a construction site. The weather barrier 11 and fabric 12 may be attached to each other with any suitable attachment or securment means.

Without limitation, the weather barrier 11 and woven fabric 12 may be attached to each other by means of adhesives, mechanical means, or by heat lamination. According to certain embodiments, adhesives are used to attach the weather barrier 11 to the fabric 12. Beads of an appropriate adhesive 13, which may be continuous or intermittent may be used to attach the weather barrier 11 to the fabric 12. Additionally, adhesive 13 may be provided on the surface of the weather barrier 11 in the form of lines or strips of adhesive. In alternative embodiments, the fabric lath 12 may be bonded to the weather barrier 11 by a substantially uniform coating of an adhesive that is applied to a surface of the weather barrier 12. Without limitation, a hot melt adhesive may be used to bond the weather barrier 11 to fabric 12 to form the composite building material 10. Suitable hot melt adhesives 13 that may be used to bond the weather barrier 11 to fabric 12 include, but are not limited to, acrylic adhesives, styrene acrylic adhesives, and aliphatic resin adhesives.

According to certain embodiments, the woven fabric 12 is attached to a polymeric sheet weather barrier 11, such as those described above. Use a polymeric sheet is used as the weather 11, it is possible to eliminate the additional adhesive means and to bond the woven fabric lath 11 directly to the polymeric sheet material 12 by means of a heat lamination process.

According to certain embodiments, weather barrier 11 and woven fabric 12 are selectively detachable from one another without causing damage to either for the purpose of working composite building material 10 around penetrations, openings, and obstructions in the building structure such as windows and doors. If adhesives are used to bond the weather barrier 11 to the woven fabric 12, then the amount of adhesive 13 used to bond weather barrier 11 to the fabric 12 should be an amount sufficient to bond the components together, while still providing the composite building material with sufficient flexibility for easy installation.
If adhesives are used to bond the weather barrier 11 and fabric 12 together, then the adhesive 13 should provide a bond strength such that the weather barrier 11 remains bonded to fabric 12 during shipping, handling, storage, installation, and throughout the installed life of the composite building material. Additionally, the adhesive bond should be such that it remains substantially unaffected by normal environmental elements, such as water/moisture, wind, and ultra-violet radiation, which might occur during short-term exposure of the building material 10 prior to installation of the exterior finishing materials.

An exterior finishing system is also provided. The exterior finishing system includes the composite building material and an exterior finish applied over the composite building material. The composite building material of the exterior finishing system includes a weather resistant barrier and a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers attached to one surface of the weather barrier.

A building wall including a composite building material is also provided. The building wall comprises a substrate and a composite building material that is attached to the exterior face of the building wall substrate. The integral composite building material used in the construction of the building wall includes a weather barrier and a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers attached to the surface of the weather barrier.

A building wall 20 incorporating the integral composite building material 10 and an exterior finish is shown in FIGS. 4-5. As is indicated in FIGS. 4-5, building wall 10 may be a typical 2x4 frame construction, although other construction techniques and configurations are equally suitable environments for composite building material 10. In fact, the composite building material 10 may also be used in conjunction with many other substrates, such as particle board, wafer board, oriented strand board, cement board, gypsum board, and masonry block.

Building wall 20 is generally constructed of a frame 21, a substrate such as a sheathing material 22, the composite building material 10, and an exterior finish 23. Frame 21 typically includes a plurality of studs 24, which are members of wood or steel having nominal dimensions of 2x4". Studs 24 are vertically oriented and are parallel and spaced apart a distance of typically 16" or 24", although these dimensions are merely illustrative. Stubs 24 are each typically fixedly attached at an upper end to a plate 25, with plate 25 typically being a member of similar dimension to studs 24 and oriented horizontally such that multiple vertical studs 24 in a wall 20 are fixedly attached to a single plate 25. Stubs 24 are usually fixedly attached to plate 25 by means of mechanical fasteners such as nails and/or screws (not shown). Moreover, studs 24 are each typically attached to a lower sill plate 26 which is of a similar configuration to plate 25.

Frame 21 additionally contains an interior surface 27 which faces toward the living area and an exterior surface 28 which faces toward the outside environment. Sheathing 22 is typically fixedly attached to exterior surface 28 of the frame 21. Sheathing 22 is typically a sheet of material, such as plywood or any of a variety of other building code approved materials such as wafer board and oriented strand board. While the installation of sheathing 22 might be optional in some circumstances, such circumstances will typically be dictated by applicable building codes. Sheathing 22 is typically attached to exterior surface 28 of the frame 21 by mechanical fasteners such as screws, nails, staples, and the like (not shown).

Composite building material 10 is then installed over sheathing 22. If, sheathing 22 is absent from the building construction, composite building material 10 can be applied and fixedly attached directly to exterior surface 28 of the frame 21, with or without an intermediate support structure. According to FIGS. 4-5, the structure includes sheathing 22.

Composite building material 10 is attached to sheathing 22 with the weather barrier 11 directly adjacent sheathing 22 and with the woven fabric 12 of the building material 10 facing outwardly toward the exterior environment. Composite building material 10 is fixedly attached to sheathing 22 using any of a variety of fastening systems such as mechanical fasteners like screws, nails, staples, or adhesives (none of which are shown). While a variety of attachment systems may be used to attach composite building material 10 to sheathing 22, it is preferred that such attachment systems create a minimum of holes and/or voids in the weather barrier 11 and are of sufficient strength to retain the composite in place both during and after the exterior finish material is installed.

Composite building material 10 is anticipated to be provided in rolls, typically in widths between 3 and 4 feet, although substantially any width may be used. Nevertheless, the composite building material 10 may also be provided in sheet form. It is anticipated that composite building material 10 will be unrolled from the roll and applied so that the longitudinal axis extends horizontally to the structure beginning at the grade level. In general, the building wall 20 is expected to be taller than the width of composite building material 10, and, therefore, it is anticipated that additional widths of composite building material 10 will be installed progressively higher on wall 20. When an additional width of composite building paper 10 is applied progressively higher on wall 20, the lower edge of the additional width of composite building material overlaps the upper edge of a previously installed width of composite building material. According to certain embodiments, the horizontally installed widths of composite building material may overlap by at least about 2 inches. When, during installation, the end of a roll of composite building material is reached, the terminal end of the roll is preferably joined to the initial end of another such roll by forming a vertical overlap. The vertical overlap is typically on the order of at least about six inches, but such dimensions are usually established and vary with local building codes. With respect to the longitudinal direction of the roll, the composite building material is provided with edges that are free of fabric 12 to allow for easy overlap of the pieces of composite building material.

Once composite building material 10 has been attached to sheathing 22, an exterior finish material may be installed over composite building material 10. The exterior finish 30 may be at least one layer of stucco, or base and finish coats of exterior insulation and finish systems (EIFS).

Stucco wall assemblies include a building wall substrate, the composite building material including the corrosion-resistant, three-dimensional lath, attached to the
exterior side or face of the building wall substrate, and at least one layer of stucco applied over the composite building material. The building wall substrate may be a frame as described above having an exterior surface, or a frame having a sheathing material attached to the exterior surface of the frame. An insulation board may be optionally attached to the exterior face of the building wall substrate before the composite building material is attached. At least one layer of stucco is applied over the composite building material. The layer of stucco may also include at least one finish coat to seal the stucco layer and to enhance the aesthetic appearance of the finish.

With regard to the stucco wall assembly, the framed wall is constructed. A substrate material is optionally attached to the exterior face of the frame. An insulation board is optionally affixed over the substrate. For stucco wall assemblies having an insulation affixed over the substrate, the composite building material is disposed over the insulation board. At least one layer of stucco is applied over the composite building material and is worked into the openings or voids of the non-metal woven fabric to form an exterior finish. It should be noted that the fabric lathe that is pre-attached to the code approved weather barrier be capable of accepting, holding, and supporting multiple layers of stucco. Thus, the integral composite building material can be utilized in multiple coat stucco systems, or those stucco systems known as one-coat stucco systems.

FIG. 5 shows an stucco system including the composite building material. According to FIG. 5, the composite building material disposed over the exterior surface of the building wall substrate. Optionally, an insulation board may be affixed to the building substrate by an adhesive or a mechanical fastener. The composite building material is applied over the insulation board and is worked into the openings or voids of the non-metal woven fabric to form an exterior finish. Once the composite building material is affixed to the building wall substrate, at least one layer of stucco is applied over the non-metal woven fabric. A stucco finish coat may be applied over the stucco to seal the stucco layer and to provide the final aesthetic appearance.

The stucco layer may be applied to the non-metal woven fabric by brushing, rolling, spraying, or troweling. The stucco may be scored to depth that is approximately level with the outer surface of the lath. The non-metal fabric lath of the composite building material has a sufficient strength to retain and support the weight of exterior finishing materials, such as, for example, wet stucco applied to its surface until the stucco sets.

As composite building material contains weather barrier and non-metal lath fixedly attached to one another, both weather barrier and non-metal lath are installed in one operation. Hereofore, weather barrier and lath were installed in separate operations requiring significant additional expense and time. Moreover, the additional step required in the prior art to separately install lath increased the potential that the integrity of weather barrier was compromised by additional nails, staples, and the like and by additional material handling. Thus, composite building material provides all of the benefits of having weather barrier and lath installed onto a building wall, and provides for significant cost and time savings.

According to certain embodiments, the integral composite building material may be provided in roll form having the approximate dimensions of 39 inches in width by 100 inches in length. It should be noted however, that the dimensions of integral composite weather barrier are not limited to the illustrative dimensions of 39 inches by 100 inches, and can be provided in any width and length desired or required.

The use of the integral composite building material incorporating a non-metal fabric lath for exterior finishing materials avoids rusting and corrosion that can be associated with the use of metal lath or wire mesh products.

The use of the integral composite building material incorporating a non-metal fabric lath for exterior finishing materials instead of metal lath or mesh products can effectively increase the overall service life of the exterior finishing system.

The use of the integral composite building material incorporating a non-metal fabric lath for exterior finishing materials in lieu of metal lath and wire mesh products does not require the use of potentially dangerous tools that present occupational hazards for the construction worker or tradesman.

Additionally, the integral composite building material incorporating a non-metal fabric lath, unlike metal lath and wire mesh products, does not have sharp edges which can pierce or penetrate the works gloves and flesh of the construction worker, thereby posing a potentially serious risk of injury.

The use of the integral composite building material incorporating a non-metal fabric lath for exterior finishing materials permits the installation of a weather barrier and reinforcement layer for exterior finishing materials in one step, thereby avoiding additional costs and delays that are customary with separately installing the weather barrier and reinforcement layer.

The present invention is not limited to the specific embodiments described above, but includes variations, modifications and equivalent embodiments defined by the following claims. The embodiments described above are not necessarily in the alternative, as various embodiments may be combined to provide the desired characteristics.

I claim:
1. An integral composite building material comprising:
a weather barrier; and
a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier.
2. The composite building material of claim 1, wherein said lath comprises a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers.
3. The composite building material of claim 1, wherein said lath is attached to said weather barrier by a securement means.
4. The composite building material of claim 3, wherein said securement means is selected from the group consisting of adhesives and heat lamination.
5. The composite building material of claim 4, wherein said adhesive is an adhesive.
6. The composite building material of claim 5, wherein said adhesive is a plurality of adhesive spots.
7. The composite building material of claim 5, wherein said adhesive comprises a least one strip of adhesive.
8. The composite building material of claim 5, wherein said adhesive is selected from the group consisting of acrylic adhesives, styrene-acrylic adhesives, and aliphatic resin adhesives.

9. The composite building material of claim 1, wherein said lath has fibers undulating in at least one of the (i) longitudinal and (ii) transverse directions.

10. The composite building material of claim 1, wherein said weather barrier is selected from the group consisting of building papers and polymeric sheets.

11. The composite building material of claim 10, wherein said building papers are selected from the group consisting of kraft paper and asphalt impregnated building paper.

12. The composite building material of claim 10, wherein said polymeric sheets are selected from the group consisting of woven polyolefin sheets and spun-bonded polyolefin sheets.

13. The composite building material of claim 12, wherein said polymeric sheet comprises a non-woven sheet of spun-bonded polyolefin fibers.

14. The composite building material of claim 13, wherein said spun-bonded polyolefin fibers are selected from the group consisting of polyethylene fibers, polypropylene fibers, and mixtures thereof.

15. The composite building material of claim 1, wherein said fibers of said lath are selected from the group consisting of glass fibers, polymer fibers, and combinations thereof.

16. The composite building material of claim 15, wherein said polymer fibers are nylon fibers.

17. The composite building material of claim 16, wherein said glass fibers are selected from the group consisting of E-glass fibers, A-glass fibers, ECR-glass fibers, S-glass fibers, and AR-glass fibers.

18. The composite building material of claim 17, wherein said glass fibers are E-glass fibers.

19. The composite building material of claim 17, wherein said glass fibers are AR-glass fibers.

20. The composite building material of claim 19, wherein said lath is alkaline resistant.

21. The composite building material of claim 1, wherein said lath has a crush resistance sufficient to support exterior finish materials.

22. The composite building material of claim 1, wherein said weather barrier and lath are selectively detachable from one another without causing damage to either.

23. The composite building material of claim 1, wherein said composite building material is supplied in a roll or sheet form.

24. A building wall comprising:

- a substrate; and
- an integral composite building material attached to said substrate, said composite building material comprising a weather barrier and a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier.

25. The building wall of claim 24, wherein said lath comprises a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers.

26. The building wall of claim 24, wherein said lath is attached to said weather barrier by a securement means.

27. The building wall of claim 26, wherein said securement means is selected from the group consisting of adhesives and a heat lamination.

28. The building wall of claim 27, wherein said securement means is an adhesive.

29. The building wall of claim 28, wherein said adhesive is a plurality of adhesive spots.

30. The building wall of claim 28, wherein said adhesive comprises at least one strip of adhesive.

31. The building wall of claim 28, wherein said adhesive is selected from the group consisting of acrylic adhesives, styrene-acrylic adhesives, and aliphatic resin adhesives.

32. The building wall of claim 26, wherein said lath has fibers undulating in at least one of the (i) longitudinal and (ii) transverse directions.

33. The building wall of claim 24, wherein said weather barrier is selected from the group consisting of building papers and polymeric sheets.

34. The building wall of claim 33, wherein said building paper is selected from the group consisting of kraft paper and asphalt impregnated building paper.

35. The building wall of claim 34, wherein said polymeric sheet is selected from the group consisting of woven polyolefin sheets and spun-bonded polyolefin sheets.

36. The building wall of claim 35, wherein said polymeric sheet comprises a non-woven sheet of spun-bonded polyolefin fibers.

37. The building wall of claim 36, wherein said spun-bonded olefin fibers are selected from the group consisting of polyethylene fibers, polypropylene fibers, and mixtures thereof.

38. The building wall of claim 26, wherein said fibers of said lath are selected from the group consisting of glass fibers, polymer fibers, and combinations thereof.

39. The building wall of claim 38, wherein said polymer fibers are nylon.

40. The building wall of claim 38, wherein said glass fibers are selected from the group consisting of E-glass fibers, A-glass fibers, ECR-glass fibers, S-glass fibers, and AR-glass fibers.

41. The building wall of claim 40, wherein said glass fibers are E-glass fibers.

42. The building wall of claim 40, wherein said glass fibers are AR-glass fibers.

43. The building wall of claim 42, wherein said lath is alkaline resistant.

44. The building wall of claim 26, wherein said lath has a crush resistance sufficient to support exterior finishing materials.

45. The building wall of claim 26, wherein said lath has a crush resistance sufficient to support exterior covering materials.

46. The building wall of claim 26, comprising an exterior covering disposed between said substrate and said composite building material.

47. The building wall of claim 46, wherein said exterior covering is stucco.

48. The building wall of claim 26, wherein said substrate is selected from the group consisting of a wood frame, metal frame, plywood sheathing, cement board, gypsum board, oriented strand board, wafer board, insulation board, masonry, and concrete masonry units.

49. The building wall of claim 26, wherein an insulation layer is disposed between said substrate and said composite building material.
50. A method of constructing a building wall comprising: attaching an integral composite building material comprising a weather barrier and a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier.

51. The method of claim 50, wherein said lath comprises a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers.

52. The method of claim 50, wherein said composite building material is an elongated strip having a greater length than width and having a longitudinal axis, and including attaching said composite building material to extend lengthwise along said substrate.

53. The method of claim 50, including overlapping vertical and longitudinal edges of adjacent strips of said composite building material, wherein a portion of an upper weather barrier overlaps a portion of an adjacent lower weather barrier.

54. The method of claim 50, including providing an elongated edge of said composite building material that is free of said woven fabric.

55. The method of claim 50, wherein said composite building material is provided in roll form, and the method includes unrolling said composite building material before or while attaching to said building wall substrate.

56. The method of claim 50, including disposing an exterior covering over said woven fabric of said composite building material.

57. The method of claim 55, wherein said exterior covering is at least one layer of stucco.

58. An exterior finishing system comprising:

an integral composite building material comprising a weather barrier and a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier; and

an exterior covering applied over said composite building material.

59. The exterior finishing system of claim 58, wherein said lath comprises a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers.

60. The exterior finishing system of claim 58, wherein said lath is attached to said weather barrier by a securement means.

61. The exterior finishing system of claim 60, wherein said securement means is selected from the group consisting of adhesives and a heat lamination.

62. The exterior finishing system of claim 61, wherein said securement means is an adhesive.

63. The exterior finishing system of claim 62, wherein said adhesive is a plurality of adhesive spots.

64. The exterior finishing system of claim 62, wherein said adhesive comprises a least one strip of adhesive.

65. The exterior finishing system of claim 60, wherein said adhesive is selected from the group consisting of acrylic adhesives, styrene-acrylic adhesives, and aliphatic resin adhesives.

66. The exterior finishing system of claim 58, wherein said lath has fibers undulating in at least one of the (i) longitudinal and the (ii) transverse directions.

67. The exterior finishing system of claim 58, wherein said weather barrier is selected from the group consisting of building papers and polymeric sheets.

68. The exterior finishing system of claim 67, wherein said building paper is selected from the group consisting of kraft paper and asphalt impregnated building paper.

69. The exterior finishing system of claim 66, wherein said polymeric sheet is selected from the group consisting of woven polyolefin fiber sheets and spun-bonded polyolefin fiber sheets.

70. The exterior finishing system of claim 69, wherein said polymeric sheet comprises a non-woven sheet of spun-bonded polyolefin fibers.

71. The exterior finishing system of claim 70, wherein said spun-bonded polyolefin fibers are selected from the group consisting of polyethylene fibers, polypropylene fibers, and mixtures thereof.

72. The exterior finishing system of claim 58, wherein said fibers of said lath are selected from the group consisting of glass fibers, polymer fibers, and combinations thereof.

73. The exterior finishing system of claim 72, wherein said polymer fibers are nylon.

74. The exterior finishing system of claim 73, wherein said glass fibers are selected from the group consisting of E-glass fibers, A-glass fibers, ECR-glass fibers, S-glass fibers, and AR-glass fibers.

75. The exterior finishing system of claim 74, wherein said glass fibers are E-glass fibers.

76. The exterior finishing system of claim 74, wherein said glass fibers are AR-glass fibers.

77. The exterior finishing system of claim 76, wherein said lath is alkaline resistant.

78. The exterior finishing system of claim 58, wherein said weather barrier and lath are selectively detachable from one another without causing damage to either.

79. A method of constructing a stucco system comprising:

optionally disposing insulation over said a building wall substrate;

attaching an integral composite building material over said substrate or over said insulation, if insulation is present, said composite building material comprising a weather barrier and a corrosion-resistant, three-dimensional lath of non-metal fibers attached to said weather barrier; and

applying at least one stucco layer over said composite building material.

80. The method of claim 79, wherein said lath comprises a corrosion-resistant, woven, three-dimensional fabric of non-metal fibers.

81. The method of claim 79, comprising applying at least one finish layer over said at least one stucco layer.

82. The method of claim 79, wherein said lath is capable of retaining and supporting the weight of a wet stucco applied thereto.

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