

Search history

- Search 1: (egg near (cardboard or box or storage or container)) and dry* and mold and surface and laminat* (Results 22)
Search 2: (cardboard or box or storage or container) and dry* and mold and (complex near surface) and laminat* (Results 318)
Search 3: 2 and inject* and ((pre near form) or preform) (Results 44)
Search 4: dry* and mold and (complex near surface) and laminat* and (resin or polymer) and (vacuum or void or suction) (Results 350)
Search 5: 4 and (resin near inject*) (Results 38)

1) Family number: 53733006 (US2013122763A)

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Title: COMPOSITE MATERIALS

Abstract: Fiber reinforced thermoset plastic composites with a glass transition temperature of greater than 500 degrees centigrade are disclosed. Certain embodiments of the disclosed fiber reinforced thermoset plastic composites are produced using pre-ceramic resin and fibers that are stable under thermal stress. Also disclosed are methods of making these fiber reinforced thermoset plastic composites. These methods include infiltrating thermally stable fibrous material with a pre-ceramic resin and introducing crosslinking. The disclosed methods produce a non-ceramic highly crosslinked thermoset plastic composite that possesses both thermal stability and mechanical strength.

Classifications:

International (IPC 8-9): B05D3/02 B05D3/06 B32B27/04 B32B5/02 (Advanced/Invention)
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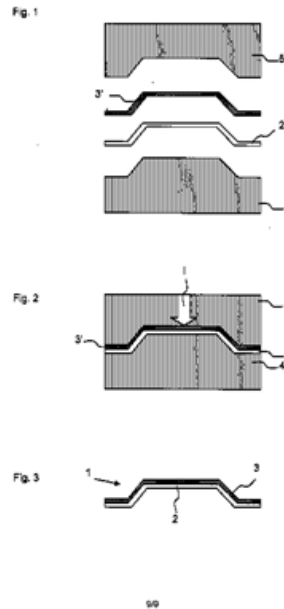
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Title: MULTILAYER FIBER PLASTIC-COMPOSITE COMPONENT WITH A CLASS-A-VIEWING SURFACE PROVIDED WITH A TRANSPARENT GLASS LAYER, COMPRISES AT LEAST ONE FIBER PLASTIC LAYER MADE OF A MATRIX RESIN, AND A FIBER MATERIAL EMBEDDED WITH CARBON FIBERS

Abstract: Multilayer fiber plastic-composite component (1) with at least one class-A-viewing surface, comprises at least one fiber plastic layer (3) made of a matrix resin, and a fiber material embedded with carbon fibers. The visible surface is provided with a transparent glass layer (2), which is connected with the fiber plastic layer by the matrix resin. An independent claim is also included for producing the fiber plastic-composite component, comprising (i) producing and forming a transparent glass sheet corresponding to a form of the viewing surface of the fiber-plastic composite component, (ii) inserting the formed glass sheet into a molding tool (4), (iii) applying the fiber material and an uncured resin matrix on the glass sheet, (iv) applying pressure and temperature to the molding tool and curing the matrix resin, thus connecting the glass sheet with the fiber plastic layer by the matrix resin and forming the fiber-plastic composite component with the fiber resin layer and the glass layer, and (v) demolding the fiber-plastic composite component after curing the matrix resin.

Classifications:

International (IPC 8-9): B29C70/42 B32B17/10 B32B27/04 B32B27/08 B32B9/00 (Advanced/Invention)
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3) Family number: 6066073 (DD281132A)

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Title: WAERMEFORMBARES LAMINAT UND VERFAHREN ZUR VERWENDUNG EINES LAMINATS HEAT-MOLDABLE LAMINATE AND PROCESS FOR USING A LAMINATE (Machine translation)

Abstract: Source: DD281132A [DE] [Source: Claim 1] Patentansprüche: 1. Waermeformbares Laminat zur Anwendung bei der Formung eines Aussenteils bei einem aussen befindlichen Karosserieblech, dadurch gekennzeichnet, dass das Laminat aus einer duennen, halbstarren Kaschierfolie, hergestellt aus einem synthetischen, harzartigen Material, und einer Qualitaetsfarbschicht fuer das Auto besteht, die mit der Oberseite der Kaschierfolie verbunden ist, wobei die Farbschicht eine synthetische, harzartige Beschichtung in der Form eines trockenen, duennen Films einschliesst, dessen Aussenflaeche eine zuvor festgelegte Glanzkraft besitzt, die auf diesen von einer stark glaenzenden Giessfolie uebertragen wird, wobei die Farbschicht ueber eine ausreichende Dehnung und Bestaendigkeit gegenueber einem Glanzverlust verfuegt, so dass das Laminat zu einem mit starken Konturen versehenen, dreidimensionalen Profil waermeformbar ist und dabei die Farbschicht im wesentlichen ihre vorgegebene Glanzkraft waehrend des Waermeformungsvorgangs beibehaelt sowie fuer die vorher festgelegten, das aeuessere Erscheinungsbild betreffenden und Bestaendigkeitseigenschaften sorgt, die nach dem Waermeformen des Laminats ausreichend sind, um als Aussenfarbueberzug beim Auto verwendbar zu sein. 2. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass das Laminat bei einer Temperatur von mindestens etwa 132 degrees centigrade waermegeformt werden kann und sich die Farbschicht beim Waermeformen bei dieser Waermeformungstemperatur um mehr als etwa 40 percent dehnt und dabei noch die Glanzkraft sowie die das aeuessere Erscheinungsbild betreffenden und Beotaendigkeitseigenschaften bewahrt. 3. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass der Farbueberzug aus einem fluorierten Polymer und acrylharzhaltigen Anstrichsystem mit thermoplastischen Eigenschaften besteht, wobei die Farbschicht auf eine Giessfolie aufgetragen und getrocknet wird und dann von der Giessfolie auf die Kaschierfolie uebertragen wird. 4. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass die Farbschicht ein thermoplastisches • Anstrichsystem aufweist, welches aus Polyvinylidenfluorid und einem Acrylharz besteht. 5. Laminat nach Anspruch 4, dadurch gekennzeichnet, dass die getrocknete Farbschicht weniger als etwa 70 Ma.- percent Polyvinylidenfluorid und weniger als etwa 50 Ma.- percent Acrylharz enthaelt, bezogen auf die Gesamtmasse der PVDF- und Acrylharz-Komponenten, die in der Farbschicht vorhanden sind. 6. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass der Farbueberzug ein pigmentiertes, synthetisches, harzartiges Material mit thermoplastischen Eigenschaften aufweist. 7. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass der Farbueberzug aus einer aeuesseren farblosen Schicht und einer sich darunter befindlichen, mit der farblosen Schicht verbundenen Farbschicht besteht. 8. Laminat nach Anspruch 7, dadurch gekennzeichnet, dass die Farbschicht ein stark dispergiertes Pigment enthaelt, und die farblose Schicht eine thermoplastische Beschichtung darstellt, die hauptsaechlich ein fluoriertes Polymer und ein Acrylharz enthaelt. 9. Laminat nach Anspruch 8, dadurch gekennzeichnet, dass die farblose Schicht ein thermoplastisches Anstrichsystem darstellt, welches im wesentlichen aus etwa 50 bis etwa 70 percent Polyvinylidenfluorid und etwa 30 bis etwa 50 percent Acrylharz besteht und dabei die Acrylharz- Komponente Polymethylmethacrylat, Polyethylmethacrylat oder Mischungen davon einschliesslich deren Kopolymere umfasst. 10. Laminat nach Anspruch 9, dadurch gekennzeichnet, dass die Farbschicht im wesentlichen aus etwa 50 bis etwa 70 percent Polyvinylidenfluorid und etwa 30 bis etwa 50 percent Acrylharz besteht und dabei die Acrylharz-Komponente Polymethylmethacrylat, Polyethylmethacrylat oder Mischungen davon einschliesslich deren Kopolymere umfasst. 11. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass der Farbueberzug auf dem waermegeformten Laminat wenigstens die Minimalwerte beim Glanz, der Wiedergabedeutlichkeit eines Abbildes, QUV, der Haerte, der Aufprallfestigkeit, der Reinigungsfaeigkeit, der Saeurebestaendigkeit, der Benzinbestaendigkeit und der Abriebfestigkeit erreicht, wie sie im wesentlichen in den Kraftfahrzeug-Spezifikationen fuer Aussenfarb-Deckanstriche bei Autos definiert und hierin beschrieben sind. 12. Laminat nach Anspruch 1,

dadurch gekennzeichnet, dass der Farbueberzug ein fluoriertes Polymer aufweist, das aus der bestehenden Gruppe Polyvinylidenfluorid sowie den Kopolymeren und Terpolymeren des Vinylidenfluorids ausgewaehlt ist. 13. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass der Farbueberzug bei einem Winkel von 60° eine Glanzkraft von mehr als etwa 75 Glanzeinheiten und ein Niveau bei der Wiedergabedeutlichkeit eines Abbildes von mehr als etwa 80 Einheiten besitzt. 14. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass die Kaschierfolie eine halbstarre Folie mit einer Dicke im Bereich von etwa 254µm bis etwa 1016µm ist. 15. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass die Kaschierfolie aus einem Material hergestellt wird, das aus der bestehenden Gruppe ABS, Polyester, amorphes Nylon, thermoplastische Polyolefine, einschliesslich Polypropylen und Polyethylen, ausgewaehlt ist. 16. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass, bezogen auf die Aussenfläche der farblosen Schicht, bei der Giessfolie ein Wachsfilm aufgebracht wird. 17. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass zwischen dem Farbueberzug und der Kaschierfolie ein Muster einer graphischen Darstellung eingedruckt ist, die durch den Farbueberzug hindurch sichtbar ist. 18. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass in der Kaschierfolie ein Pigment enthalten ist. 19. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass in dem Farbueberzug eine metallische, geschuppte Farbschicht enthalten ist. 20. Laminat nach Anspruch 1, dadurch gekennzeichnet, dass auf der Aussenfläche des Farbueberzugs eine wasserloesliche Schutzbeschichtung aufgetragen ist. 21. Verfahren zur Verwendung eines Laminats als Farbueberzug, das fuer den Ausseneinsatz beim Auto geeignet ist, bei einem Aussenkarosseriestell aus Plaste fuer ein Kraftfahrzeug, dadurch gekennzeichnet, dass das Verfahren die folgenden Verfahrensstufen umfasst: a) das Aufbringen einer farblosen Schicht aus einem synthetischen, harzhaltigen Material in Form eines duennen Films auf der Oberfläche einer flexiblen Giessfolie und das Trocknen der farblosen Schicht auf der Giessfolie, wobei die Oberfläche der Folie eine spiegelnde Remission besitzt, um, auf die Oberfläche der getrockneten farblosen Schicht eine Glanzkraft zu uebertragen, die fuer die Aussenanwendung beim Auto ausreichend ist; die Bildung einer Farbschicht aus einem pigmentierten, synthetischen, harzartigen Material, die getrocknet wird und auf der farblosen Schicht haftet; das ueberfuehren der getrockneten farblosen Schicht und Farbschicht auf eine halbstarre Kaschierfolie aus einem synthetischen, harzartigen Material, um eine Verbundfarbschicht zu bilden, die mit einer Oberseite der Kaschierfolie verbunden ist, wobei die farblose Schicht die Aussenfläche von dem uebertragenen Farbueberzug bildet und die Farbschicht zwischen der farblosen Schicht und der Oberseite von der Kaschierfolie eingebunden ist, und dabei die Aussenfläche der farblosen Schicht beim uebertragen von deren Giessfolie im wesentlichen den dabei erhaltenen Glanz bewahrt; das Waermeformen der Kaschierfolie und des darauf befindlichen Verbund-Farbueberzugs, um ein dreidimensional geformtes, vorgestaltetes Laminat zu bilden; und das Einlegen des vorgestalteten Laminats in eine Pressform und das Spritzgiessen von einer synthetischen, harzartigen Traegermasse auf das vorgestaltete Laminat, um ein Aussenkarosserieblech mit einem fertigen Aussenfarbanstrich fuer das Auto zu gestalten; die farblose Schicht besteht aus einem Material, dass waehrend der Waermeformungsstufe im wesentlichen die Glanzkraft beibehaelt; die Kaschierfolie weist eine genuegende Dicke und ausreichende Dehnung auf, um die beim Traegermaterial vorhandenen Fehler zu verdecken und bei der folgenden Haftung von dem Laminat auf dem Traegermaterial eine im wesentlichen fehlerfreie, glaezende Oberfläche bei der farblosen Schicht bewahrt wird; der fertige Verbundfarbanstrich schafft ausreichende, das aeussere Erscheinungsbild betreffende und Bestaendigkeitseigenschaften fuer die Anwendung als Aussenfarbueberzug beim Auto, oder b) das Aufbringen einer farblosen Schicht aus einer Loesung von Vinylidenfluorid und Acrylharz in Form einer duennen Schicht auf einer Oberfläche von einer flexiblen Giessfolie und das Trocknen der farblosen Schicht auf der Giessfolie, wobei die Oberfläche der Folie eine spiegelnde Remission besitzt, bei der eine Glanzkraft auf die Oberfläche der getrockneten farblosen Schicht uebertragen wird, die fuer die Aussenanwendung beim Auto genuegt; das Giessen einer Farbschicht mit einer pigmentierten Loesung aus Vinylidenfluorid und Acrylharz in Form einer duennen Schicht und das Trocknen der Farbschicht; das ueberfuehren der getrockneten farblosen Schicht und Farbschicht auf eine halbstarre Kaschierfolie aus einem synthetischen, harzartigen Material, um eine Verbundfarbschicht zu bilden, die mit einer Oberseite von der Kaschierfolie verbunden ist, bei der die farblose Schicht die Aussenfläche von der ueberfuehrten Farbschicht ist und die Farbschicht selbst zwischen der farblosen Schicht und der Oberseite der Kaschierfolie eingebunden ist, und dabei die Aussenfläche von der farblosen Schicht im wesentlichen den Glanz behaelt, den sie von der Giessfolie uebernimmt hat; das Waermeformen der Kaschierfolie und der Verbundfarbschicht, die sich darauf befindet, um ein dreidimensional geformtes, vorgestelltes Laminat zu bilden; und das Haften des vorgestellten Laminats an einem synthetischen, harzartigen Traegermaterial, um ein aeusseres Karosseriestell zu bilden; dabei behaelt die farblose Schicht im wesentlichen ihre Glanzkraft beim Waermeformungsvorgang; die Kaschierfolie verfuegt ueber eine ausreichende Staerke und genuegend Dehnung, um die bei dem Traegermaterial vorhandenen Maengel zu verdecken, so dass nach der Haftung des Laminats auf dem Traegermaterial eine im wesentlichen fehlerfreie, glaezende Oberfläche bei der farblosen Schicht vorliegt; der Verbundfarbueberzug sorgt fuer die entsprechenden, das aeussere Erscheinungsbild und Bestaendigkeitseigenschaften betreffenden Anwendungen als Aussenanstrichschicht beim Auto. 22. Verfahren nach Anspruch 21a, dadurch gekennzeichnet, dass das Laminat bei einer Temperatur von mehr als etwa 132°C waermegeformt wird und die Verbundfarbschicht sich waehrend der Waermeformungsstufe um mehr als etwa 40 percent dehnt und dabei noch die Glanzkraft sowie die das aeussere Erscheinungsbild betreffenden und Bestaendigkeitseigenschaften bewahrt. 23. Verfahren nach Anspruch 21 a, dadurch gekennzeichnet, dass die farblose Schicht aus einem fluorierten Polymer und einem acrylharzhaltigen Material besteht. 24. Verfahren nach Anspruch 23, dadurch gekennzeichnet, dass die farblose Schicht aus einem thermoplastischen Anstrichsystem besteht, bei dem das fluorierte Polymer aus der Gruppe, die aus Polyvinylidenfluorid sowie Kopolymeren und Terpolymeren des Vinylidenfluorids besteht, ausgewaehlt ist. 25. Verfahren nach Anspruch 24, dadurch gekennzeichnet, dass die getrocknete farblose Schicht weniger als etwa 70Ma. - percent Polyvinylidenfluorid (PVDF) und weniger als etwa 50Ma. - percent Acrylharz aufweist, bezogen auf die Gesamtfeststoffe an Acrylharz und PVDF, die in der farblosen Schicht vorhanden sind. 26. Verfahren nach Anspruch 21 a, dadurch gekennzeichnet, dass der Farbueberzug die Minimalwerte beim Glanz, der Wiedergabedeutlichkeit eines Abbildes, QUV, der Benzinbestaendigkeit, der Reinigungsfaeihigkeit, der Saurebestaendigkeit, der Haerte, der Abriebfestigkeit und Aufprallfestigkeit aufweist, wie sie im wesentlichen in den Kraftfahrzeug-Spezifikationen fuer Aussenfarb-Deckanstriche festgelegt und hierin beschrieben sind. 27. Verfahren nach Anspruch 21 a, dadurch gekennzeichnet, dass das vorgestaltete Laminat mit dem Traegermaterial durch Spritzgussueberzugs-, Reaktionsspritzguss- oder Duroplastplattenform-Techniken pressgeformt wird. 28. Verfahren nach Anspruch 21 a, dadurch gekennzeichnet, dass die farblose Schicht auf die Giessfolie aufgebracht wird und dabei ein thermoplastisches Anstrichsystem aufweist, welches Polyvinylidenfluorid und ein Acrylharz umfasst, wobei das Polyvinylidenfluorid in einer Loesung aus Acrylharz dispergiert vorliegt. 29. Verfahren nach Anspruch 21 a, dadurch gekennzeichnet, dass die auf die Giessfolie aufgebraachte farblose Schicht ein thermoplastisches Anstrichsystem darstellt, welches aus einer Loesung von Polyvinylidenfluorid und Acrylharz besteht. 30. Verfahren nach Anspruch 29, dadurch gekennzeichnet, dass der fertige Farbueberzug bei einem Winkel von 60 degrees eine Glanzkraft von mehr als etwa 75 Glanzeinheiten und ein Niveau bei der Wiedergabedeutlichkeit eines Abbildes von mehr als etwa 80 Einheiten aufweist. 31. Verfahren nach Anspruch 21 a, dadurch gekennzeichnet, dass die Kaschierfolie eine halbstarre Folie mit einer Dicke im Bereich von etwa 254 bis etwa 1016µm ist. 32. Verfahren nach Anspruch 21 a, dadurch gekennzeichnet, dass die Kaschierfolie aus einem Material hergestellt wird, das aus der Gruppe, die aus ABS, Polyester, amorphem Nylon und thermoplastischen Polyolefinen einschliesslich Polypropylen und Polyethylen besteht, ausgewaehlt ist. 33. Verfahren nach Anspruch 21 a, dadurch gekennzeichnet, dass auf die Giessfolie ein duenner Wachsfilm aufgebracht ist, bevor es zum Auftraegen der farblosen Schicht auf der Giessfolie kommt. **Machine translation:** [Source: claim 1] Claims: 1 heat form bares laminate for use in forming an outer part at one outside the body sheet, characterised in that the laminate of a thin, semi-rigid laminating film, is made of a synthetic resin-like material, and a quality paint for the car, with the top of the laminating film is connected, where the color layer includes a synthetic resinous coating in the form of a dry, thin film, whose surface has previously set shine power, on this by a high gloss cast film is transferred, where the layer of paint over a sufficient elongation and resistance to a loss of gloss has, so that the laminate to a marked with strong contours, three-dimensional profile is heat moldable and doing the paint essentially maintains their specified gloss force during the heat forming process as well as previously laid down for the that appearance provides concerned and resistance properties, which are sufficient after the thermoforming of the laminate, to be used as exterior color coating at the car. 2. laminate that the laminate at a temperature of at least approximately 132 degrees centigrade heat are can shaped according to claim 1, characterised in the coat of paint in the forms of heat at this heat-forming temperature percent stretches to more than about 40 and appearance preserves still the power of gloss, as well as the concerned and Bestaendigkeitseigenschaften. 3. laminate according to claim 1, characterised in that the color coating consists of a fluorinated polymer and containing acrylic resin paint system with thermoplastic properties, which is the layer of paint applied to a cast film and dried and then by the cast film on the laminating film is transmitted. 4. laminate according to claim 1, characterised in that the paint has a thermoplastic • painting system, which consists of polyvinylidene fluoride, and an acrylic resin is. 5. laminate according to claim 4, characterised in that the dried paint containing less than about 70 Ma. - percent poly vinylidene fluoride and less than about 50 Ma. - percent acrylic resin, based on the total mass of PVDF - acrylic resin components that are present in the

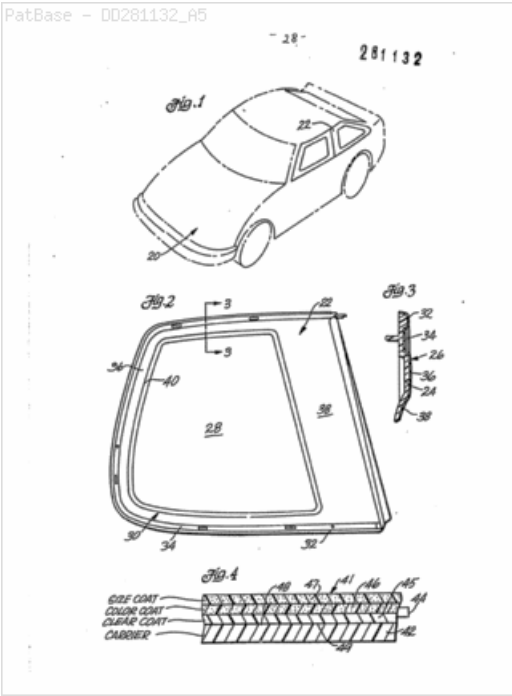
coat of paint. 6 laminated according to claim 1, characterised in that the color coating is a pigmented, synthetic resin-like material with thermoplastic properties. 7 laminated according to claim 1, characterised in that the color coating coating, associated with the colorless layer consists of an outer layer of colorless and one including. 8 laminate flooring according to claim 7, characterised in that the paint contains a highly dispersed pigment, and the colourless layer represents a thermoplastic coating that contains mainly a fluorinated polymer and an acrylic resin. 9 laminate according to claim 8, characterized that the colorless layer represents a thermoplastic coating system, which essentially consists of about 50 to 70 percent of polyvinylidene fluoride and about 30 to 50 percent acrylic resin and flooring in the acrylic resin component polymethyl methacrylate, Polyethylmethacrylat, or mixtures of them including their copolymers. 10 laminate of claim 9, characterised by the fact that the paint essentially from around 50 to about 70 percent of polyvinylidene fluoride and about 30 to 50 percent acrylic resin is and thereby the acrylic resin component of polymethyl methacrylate, poly ethyl methacrylate, or mixtures of them including their copolymers. 11. Laminate according to claim 1, characterised in that the color coating on the heat-molded laminate defined at least the minimum in the gloss, the play clearly an image, QUV, the hardness, the impact resistance, cleanability, the resistance to acids, reached gasoline resistance and the resistance to abrasion, as they essentially in the motor vehicle specifications for Aussenfarb deck coatings for cars and are herein described. 12 laminated according to claim 1, characterised in that the color coating is a fluorinated polymer, which from the existing group of polyvinylidene fluoride, and the copolymers and Terpolymers of vinylidene fluoride is selected. 13 laminate according to claim 1, characterised in that the color cover at an angle of 60 "has a gloss force of more than about 75 gloss units and a level when the replay clearly of an image of more than 80 units. 14 laminate according to claim 1, characterised in that the laminating foil a semi-rigid foil with a thickness in the range of approximately 254 pm until approximately 1016 is pm. 15 laminated according to claim 1, characterised the laminating film is made from a material that consists of the existing group of ABS, polyester, amorphous thermoplastic polyolefins, nylon is selected including polypropylene and polyethylene. 16 laminated according to claim 1, characterised in that, relative to the outside of the colorless layer, with the cast film a wax film is applied. 17 laminate according to claim 1, characterised in that a pattern of a graph is printed between the colour coating and laminating foil, which through the color coating through is visible. 18 laminated according to claim 1, characterised in that a pigment is contained in the laminating film. 19 laminate according to claim 1, characterised in that there is a metallic scaled coat of paint in the paint coating. 20 laminated according to claim 1, characterised in that a water soluble protective coating is applied to the outer surface of the paint coating. 21 procedures for using a laminate color coat, which is suitable for outdoor use in the car, with an outer body frame plastic for a motor vehicle, this marked that the procedure involves the following process stages: a) to bring a colorless layer of a synthetic resinous material in the form of a thin film on the surface of a flexible cast film and dasTrocknenderfarblosen layer on the cast film, where the surface of the film has a reflective remission, to. On the surface of the dried colorless layer a gloss force to transfer that is sufficient for outdoor use in the car. the formation of a layer of paint from a pigmented, synthetic resin-like material, which is dried and is liable to the colorless layer; that transform the dried colorless layer and layer of paint on a semi-rigid laminated foil made of a synthetic resin-like material, to form a composite coating that is connected with a top of the laminating film, aie colorless layer forms the outer surface of the transmitted color plating and the paint between the colorless layer and the top of the laminating film is integrated, and the outer surface of the colorless layer at the transfer their cast film essentially the glamour it received kept; the heat forms of the laminating foil and on the composite color placement, to make a three-dimensionally shaped, the laminate; and the loading of pre designed laminate in a mould and the injection of a synthetic resin-like. vehicle dimensions on the pre-designed laminate to make an external body sheet metal with a finished exterior paint for the car; the colourless layer consists of a material that retains during the heat-forming stage essentially the power of gloss; the laminating foil has a sufficient thickness and adequate expansion, to cover the existing carrier material error and the following liability of the laminate to the substrate is a essentially healthy, shiny surface of colorless layer preserves; the finished composite paint creates sufficient the appearance question and resistance properties for the application as exterior color coat in the car, or b) applying a colorless layer of a solution of polyvinylidene fluoride and acrylic resin in the form of a thin layer on a surface of a flexible cast film and dasTrocknen of the fai bare layer on cast film, where the surface of the film has a reflective response, in which a gloss force dried colorless layer is transferred to the surface, which is enough for outdoor use in the car. Pouring a layer of paint with a pigmented solution of polyvinylidene fluoride and acrylic resin in the form of a thin layer and the drying of the coating; that transform the dried colorless layer and layer of paint on a semi-rigid laminated foil made of a synthetic resin-like material, to a composite coating to 1, which is connected, where the colourless layer is the outer surface of the convicted coat of paint and the paint itself between the colorless layer and the top of the laminating film is involved, and while the outer surface of the colorless layer essentially retains the luster with a top of the laminating film, the it has; readmitted by the cast film the heat forms of the laminating film and of the composite coating that is sure to make a three-dimensionally shaped, featured laminate; and the adhesion of the laminate on a synthetic resin-like backing material to form an outer body frame; While the colourless layer essentially retains luster strength on the heat forming process; the laminating foil has a sufficient strength and enough expansion, to cover up the shortcomings existing in the substrate so that according to the liability of the laminate on the Traegermaterial an essentially healthy, shiny surface is the colorless layer; the composite color coating ensures the appropriate appearance and resistance properties applications as external coating layer at the car. 22. Process according to claim 21a, characterised in that the laminate with a temperature of more than about 132eC heat is formed and the composite paint percent extends during heat-forming stage by more than about 40, and appearance preserves still the power of gloss, as well as the concerned and resistance properties. 23 process according to claim 21 a, characterised in that the colorless layer consists of a fluorinated polymer and an acrylic resin-based material. 24 process according to claim 23, characterised in that the colorless layer consists of a thermoplastic coating system, in which the fluorinated polymer from the group, which consists of polyvinylidene fluoride as well as copolymers and Terpolymers of vinylidene fluoride. is selected. 25 procedure of claim 24, characterised in that the dried colorless layer less than? twa 70Ma.-percent of polyvinylidene fluoride (PVDF) and less than approximately 50Ma.-percent acrylic resin has, relative to the total solids acrylic resin and PVDF, which are present in the colorless layer. 26 process according to claim 21 a, characterised in that the color coating minimum values when the gloss, the play clearly an image, QUV, the petrol resistance, cleanability, the acid resistance, hardness, which has abrasion resistance and impact strength, essentially herein described and set as they are in the vehicle specifications for Aussenfarb-cover paintings. 27 process according to claim 21 a, characterised in that the pre-designed laminate with the substrate press is formed by injection molding coating, reaction injection molding or thermoset plates form techniques. 28 process according to claim 21 a, characterised in that the colorless layer on cast film is applied and thereby a thermoplastic coating system has, what polyvinylidene fluoride and includes an acrylic resin, whereby the polyvinylidene fluoride in a solution made of acrylic resin dispersed is present. 29 process according to claim 21 a, characterised in that the colorless layer applied on the cast film is a thermoplastic coating system, which consists of a solution of polyvinylidene fluoride and acrylic resin. 30 process according to claim 29, characterised in that the finished color cover at an angle degrees has a gloss force of more than about 75 gloss units and a level when the replay clearly of an image of more than 80 units of 60. 3. process according to claim 21 a, characterised in that the laminating film is a semi-rigid foil with a thickness in the range of approximately 254-about 1016 pm. 32. process according to claim 21 a, characterised in that the laminating film is made from a material, from the group, ABS, polyester, amorphous nylon and thermoplastic polyolefins including polypropylene and polyethylene, is selected. 33. process according to claim 21 a, characterised in that a thin film of wax is applied on the cast film before it comes to the orders of the colorless layer on cast film.

Classifications:

International (IPC 8-9): B05D7/14 B29C45/14 B29C45/46 B29C63/02 B29D7/00 (Advanced/Invention);

B05D7/14 B29C45/14 B29C45/46 B29C63/02 B29D7/00 (Core/Invention)

International (IPC 1-7): B05D7/14 B29C45/14 B29C45/46 B29C63/02 B29D7/00



Family:

Publication number	Publication date	Application number	Application date
DD281132 A5	19900801	DD19880314435	19880405

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Probable Assignee: AVERY INT CORP
Assignee(s): (std): AVERY INT CORP
Assignee(s): AVERY INT US CORP
Inventor(s): (std): SPAIN PATRICK L ; TROUG KEITH L
Inventor(s): TROUG KEITH L US ; SPAIN PATRICK L US

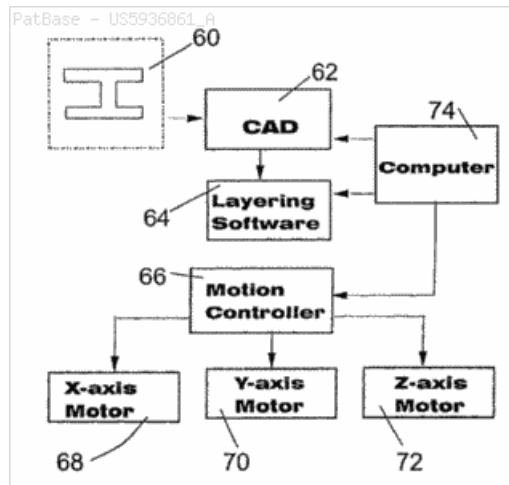
4) Family number: 11670079 (US5936861A) © PatBase

Title: APPARATUS AND PROCESS FOR PRODUCING FIBER REINFORCED COMPOSITE OBJECTS

Abstract: A process and apparatus for making three-dimensional, composite material objects of a predetermined shape by sequentially depositing multiple layers of continuous reinforcement fibers and solidifying matrix material on a base member in a desired pattern. The apparatus comprises (a) a movable nozzle having a flow passage and a dispensing outlet, (b) a supply of reinforcement fibers and a matrix material, a mixing device for impregnating the fibers with a matrix material to form a preimpregnated tow, and a heating device for introducing the matrix material in a fluid state, (c) a base member to support the object being made, (d) mechanical movement devices for moving the base member relative to the movable nozzle in a predetermined sequence and pattern, and for displacing the movable nozzle a predetermined incremental distance relative to the base member and relative to each successive layer deposited prior to the start of the formation of each successive layer to form multiple layers of composite material of a predetermined thickness, and (e) a metering device for discharging the preimpregnated tow at a predetermined rate onto the base member. The apparatus preferably further comprises (f) a computer-aided design computer and supporting software programs that are capable of creating a three-dimensional drawing of a desired object and converting the drawing into multiple elevation layer data, and (g) a three-dimensional motion controller electronically linked to the mechanical movement devices and operative to actuate these movement devices in response to the drive signals received from the computer.

Classifications:

International (IPC 8-9): B29C67/00 B29C70/38
G05B19/4099 (Advanced/Invention);
B29C67/00 B29C70/04 G05B19/4097 (Core/Invention)
International (IPC 1-7): G06F19/00 G06G7/66
CPC: B29C70/384 G05B19/4099 B33Y10/00 B33Y30/00 B33Y50/02
B33Y70/00 B29C64/112
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Family:

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US5936861 A	19990810	US19970911227	19970815

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Probable Assignee: NANOTEK INSTRUMENTS INC

Assignee(s): (std): NANOTEK INSTR INC ; NANOTEK INSTRUMENTS INC

Inventor(s): (std): WANG C JEFF ; MA ERJIAN ; JANG BOR Z

5) Family number: 32520138 (US2007229995A)

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Title: BACK CHASSIS INTEGRATING REFLECTOR, BACK LIGHT AND LIQUID CRYSTAL DISPLAY

Abstract: A modularized reflector is produced by integrating or laminating: a sheet metal back chassis in which a light source supporting section, a through-hole or a groove for extracting a light source electrode terminal, and a frame for supporting a light diffusing plate and an optical film are integrally formed through sheet metal working; and a light reflecting layer made of a molded product of a light reflective thermoplastic resin material formed into a shape for covering the back chassis. By producing a backlight device and a liquid crystal display using the reflector, there are provided the reflector reduced in the number of components, in the number of assembly steps, and in weight and thickness, and a back light and a liquid crystal display using the reflector.

Classifications:

International (IPC 8-9): F21S2/00 F21V7/00 F21V7/04 F21V7/22

G02B5/08 G02F1/1335 G02F1/13357 (Advanced/Invention);

F21V7/00 F21V7/22 F21Y101/02 F21Y103/00 G02B5/08

G02F1/13357 (Advanced/Non-invention);

F21S2/00 G02B5/08 G02F1/13 (Core/Invention)

International (IPC 1-7): F21S2/00 F21V7/00 G02B5/08 G02F1/1335

G02F1/3357

CPC: G02F1/133608 G02F1/133604 G02F1/133605 G02F2001/133628

G02B5/08

European: G02B5/08 G02F1/1336B5 S02F1/1336B2 S02F1/1336B3

S02F1/1336V

US: 359/883 359/883P 362/632 362/633 362/634

JP F-Term: 2H042 2H042/DA01 2H042/DA12 2H042/DA20 2H042/DA22 2H042/DC04 2H042/DD04 2H042/DE04 2H091 2H091/FA16 2H091/FA41 2H091/FA44 2H091/FA50 2H091/FA52 2H091/FA54 2H091/FA56 2H091/FA58 2H091/FA60 2H091/FA62 2H091/FA64 2H091/FA66 2H091/FA68 2H091/FA70 2H091/FA72 2H091/FA74 2H091/FA76 2H091/FA78 2H091/FA80 2H091/FA82 2H091/FA84 2H091/FA86 2H091/FA88 2H091/FA90 2H091/FA92 2H091/FA94 2H091/FA96 2H091/FA98 2H091/FA100 2H091/FA102 2H091/FA104 2H091/FA106 2H091/FA108 2H091/FA110 2H091/FA112 2H091/FA114 2H091/FA116 2H091/FA118 2H091/FA120 2H091/FA122 2H091/FA124 2H091/FA126 2H091/FA128 2H091/FA130 2H091/FA132 2H091/FA134 2H091/FA136 2H091/FA138 2H091/FA140 2H091/FA142 2H091/FA144 2H091/FA146 2H091/FA148 2H091/FA150 2H091/FA152 2H091/FA154 2H091/FA156 2H091/FA158 2H091/FA160 2H091/FA162 2H091/FA164 2H091/FA166 2H091/FA168 2H091/FA170 2H091/FA172 2H091/FA174 2H091/FA176 2H091/FA178 2H091/FA180 2H091/FA182 2H091/FA184 2H091/FA186 2H091/FA188 2H091/FA190 2H091/FA192 2H091/FA194 2H091/FA196 2H091/FA198 2H091/FA200 2H091/FA202 2H091/FA204 2H091/FA206 2H091/FA208 2H091/FA210 2H091/FA212 2H091/FA214 2H091/FA216 2H091/FA218 2H091/FA220 2H091/FA222 2H091/FA224 2H091/FA226 2H091/FA228 2H091/FA230 2H091/FA232 2H091/FA234 2H091/FA236 2H091/FA238 2H091/FA240 2H091/FA242 2H091/FA244 2H091/FA246 2H091/FA248 2H091/FA250 2H091/FA252 2H091/FA254 2H091/FA256 2H091/FA258 2H091/FA260 2H091/FA262 2H091/FA264 2H091/FA266 2H091/FA268 2H091/FA270 2H091/FA272 2H091/FA274 2H091/FA276 2H091/FA278 2H091/FA280 2H091/FA282 2H091/FA284 2H091/FA286 2H091/FA288 2H091/FA290 2H091/FA292 2H091/FA294 2H091/FA296 2H091/FA298 2H091/FA300 2H091/FA302 2H091/FA304 2H091/FA306 2H091/FA308 2H091/FA310 2H091/FA312 2H091/FA314 2H091/FA316 2H091/FA318 2H091/FA320 2H091/FA322 2H091/FA324 2H091/FA326 2H091/FA328 2H091/FA330 2H091/FA332 2H091/FA334 2H091/FA336 2H091/FA338 2H091/FA340 2H091/FA342 2H091/FA344 2H091/FA346 2H091/FA348 2H091/FA350 2H091/FA352 2H091/FA354 2H091/FA356 2H091/FA358 2H091/FA360 2H091/FA362 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TW200604467 A	20060201	TW20050119861	20050615
US2007229995 AA	20071004	US20050629514	20050610
US7832916 BB	20101116	US20050629514	20050610
WO05124401 A1	20051229	WO2005JP10669	20050610

Priority:

JP20040182069 20040621 JP20040301583 20041015 JP20060514719 20050610
WO2005JP10669 20050610

Probable Assignee: IDEMITSU KOSAN CO LTD

Assignee(s): (std): IDEMITSU KOSAN CO ; KAWATO HIROSHI ; KOGURE MASAMI

Assignee(s): IDEMITSU KOSAN CO LTD

Inventor(s): (std): MASAMI KAWATO HIROSHI KOGURE ; MASAMI KOGURE ; KOGURE MASAMI ; KAWATO HIROSHI ; HIROSHI KAWATO

Inventor(s): KAWATO HIROSHI KOGURE MASAMI

Agent(s): OHTANI TAMOTSU; TOHEI MASAMICHI; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT PC; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

6) Family number: 41746148 (US2008106007A)

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Title: RESIN INFUSION PROCESS UTILIZING A REUSABLE VACUUM BAG

Abstract: An improved reusable vacuum bag for use in the manufacture of fiber-reinforced composite components, wherein a polyurea-based prepolymer mixture is applied to a prepared surface, such as the surface of an open mold, and allowed to rapidly polymerize under ambient conditions to form the reusable vacuum bag. The polyurea-based prepolymer is made by combining an isocyanate component with a resin blend component, and preferably mixed and dispensed using a spray device. The prepolymer mixture forms a coating that quickly polymerizes at ambient conditions into a flexible vacuum bag having a shape conforming to the receiving surface. The vacuum bag, once formed, may be used repeatedly to fabricate a plurality of composite parts.

Classifications:

International (IPC 8-9): B29C43/12 B32B1/00

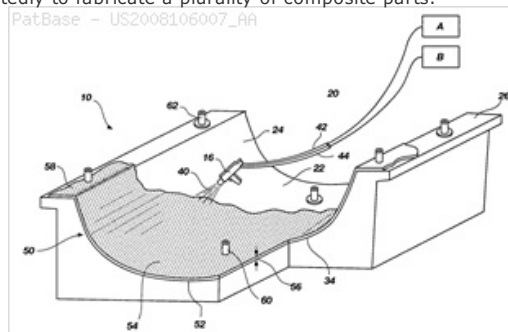
B32B3/00 (Advanced/Invention);

B29C43/10 (Core/Invention)

CPC: B29C41/08 B29C43/12 B29C43/3642 B29C2043/3644

European: B29C41/08 B29C43/36D L29C43/12 L29C43/36D1

US: 264/226 264/226S 264/571 264/571P 425/405.1 425/405.100S



Family:

Publication number	Publication date	Application number	Application date
US2008106007 AA	20080508	US20070975009	20071016
WO08048672 A2	20080424	WO2007US22263	20071017
WO08048672 A3	20080703	WO2007US22263	20071017

Priority:

US20060829831P 20061017 US20070975009 20071016

Probable Assignee: AMERICAN CONSULTING TECHNOLOGY AND RESEARCH INC

Assignee(s): (std): KIPP MICHAEL D ; MCCARVILL WILLIAM ; MCCARVILL WILLIAM T ; PUGH DILWORTH L ; RIDGES MICHAEL D ; AMERICAN CONSULTING TECHNOLOGY

Assignee(s): AMERICAN CONSULTING TECHNOLOGY AND RESEARCH INC

Inventor(s): (std): KIPP MICHAEL D ; MCCARVILL WILLIAM ; MCCARVILL WILLIAM T ; PUGH DILWORTH L ; RIDGES MICHAEL D

Inventor(s): KIPP MICHAEL ; RIDGES MICHAEL ; PUGH DILWORTH

Agent(s): THORPE NORTH AND WESTERN LLP; JOHNSON CHRISTOPHER L ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

7) Family number: 49576181 (GB2492398A)

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Title: MANUFACTURING AN OPTICAL COMPOSITE USING INVERTED LIGHT COLLIMATING SURFACE FEATURES

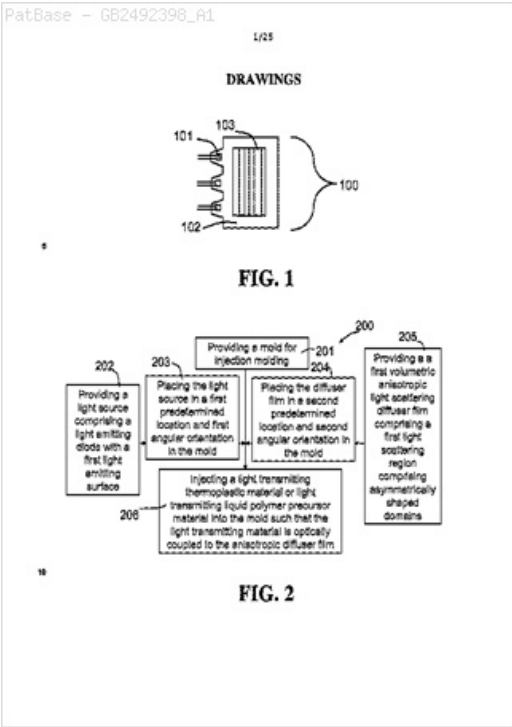
Abstract: An optical composite is made by forming inverted light collimating surface features 2810 in a first material and optically

coupling a second material 2808 to the inverted light collimating features, the optical coupling forming a non-planar interface between the first material and the second material. The refractive index of the second material may be greater than that of the first material. The inverted light collimating surface features may be the three-dimensional inverse of light collimating features and may be concave hemispherical recesses, conical recesses, prism or groove recesses, curved or other recessed shapes. The optical composite may be used as a diffuser for a backlight for LCDs and radiation-cured embossing or thermal embossing may be used for forming the inverted light collimating surface features.

Classifications:

International (IPC 8-9): B29D11/00 G02B27/30 (Advanced/Invention)

CPC: B29D11/00365 B29D11/0073 G02B27/30



Family:

Publication number	Publication date	Application number	Application date
GB201111205 A0	20110817	GB20110011205	20110630
GB2492398 A1	20130102	GB20110011205	20110630

Priority:

GB20110011205 20110630

Probable Assignee:

FUSION OPTIX INC

Assignee(s): (std):

FUSION OPTIX INC

Inventor(s): (std):

COLEMAN ZANE

Inventor(s):

ZANE COLEMAN

8) Family number: 50735189 (US2014306164A)

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Title: COMPOSITE MATERIALS COMPRISING CONDUCTIVE NANO-FILLERS

Abstract: A process for the production of a composition comprising one or more conductive nano-filler(s), one or more polyarylethersulphone thermoplastic polymer(s) (A), one or more uncured thermoset resin precursor(s) (P), and optionally one or more curing agent(s) therefor, wherein said process comprises mixing or dispersing a first composition comprising one or more conductive nano-filler(s) and one or more polyarylethersulphone thermoplastic polymer(s) (A) with or into one or more uncured thermoset resin precursor(s) (P), and optionally one or more curing agent(s) therefor.

Classifications:

International (IPC 8-9): B82Y30/00 C08J3/20 C08K3/04 C08K3/08

C08K3/18 C08K7/04 C08K7/24 C08K9/04 C08L101/00 C08L63/00

C08L81/06 C09C1/44 C09C3/10 C09D5/32 H01B1/06 H01B1/22

H01B1/24 H01B13/00 H01Q17/00 H05K9/00 (Advanced/Invention);

B82Y30/00 B82Y40/00 (Advanced/Non-invention)

CPC: H01B1/22 C08K7/24 H05K9/0079 C08L63/00 H01Q17/00 B82Y30/00

B82Y40/00 Y10S977/753 Y10S977/847 Y10S977/932 C08L81/06

C08K2201/011 C08K3/04 C08K3/041

US: 252/511

JP F-Term: 4F070 4F070/AA46 4F070/AA58 4F070/AC04 4F070/AC13

4F070/AC15 4F070/AC23 4F070/AC28 4F070/AD02 4F070/AE01

4F070/AE06 4F070/AE21 4F070/FA03 4F070/FB06 4F070/FC06 4J002

4J002/AA02 4J002/CD05 4J002/CD13 4J002/CL00 4J002/CL06

4J002/CN03 4J002/DA03 4J002/DA08 4J002/DE01 4J002/DE09

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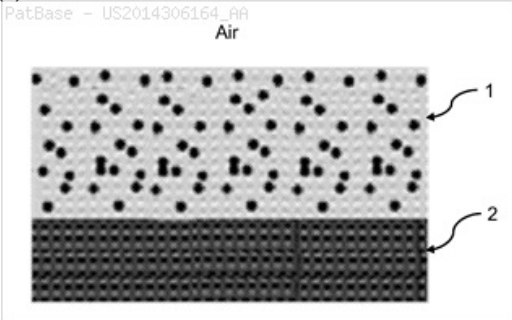
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5G301 5G301/DA20 5G301/DA32 5G301/DA42 5G301/DD06 5G301/DE01 5G323

JP F-Index: C08J3/20/CFC/A C08J3/20/CFC/Z C08J3/20/CFJ C08K3/04 C08K3/08 C08K3/18 C08K7/04 C08K9/04 C08L101/00

C08L63/00/C C08L63/00/Z C08L81/06 C09C1/44 C09C3/10 H01B1/24/Z H01B13/00/Z

JP Facet: CFC CFJ



Family:

Publication number	Publication date	Application number	Application date
AU2012374052 AA	20140522	AU20120374052	20121219
AU2012374052 BB	20150924	AU20120374052	20121219
BR112014011614 A2	20170613	BR20141111614	20121219
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CN103946312 B	20170524	CN201280057263	20121219
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KR101942368 B1	20190128	KR20147017258	20121219
KR20140105777 A	20140902	KR20147017258	20121219
MX2014005925 A1	20140605	MX20140005925	20121219
RU2014130203 A	20160220	RU20140130203	20121219
RU2611512 C2	20170227	RU20140130203	20121219
TW201335281 A	20130901	TW20120149411	20121222
TWI580731 B	20170501	TW20120149411	20121222
US2014306164 AA	20141016	US20120356653	20121219
US2017301428 AA	20171019	US20170471160	20170328
US9640297 BB	20170502	US20120356653	20121219
US10236092 BB	20190319	US20170471160	20170328
WO13141916 A2	20130926	WO2012US70472	20121219
WO13141916 A3	20140313	WO2012US70472	20121219

Priority:

GB20110022296 20111223 CN201280057263 20121219 WO2012US70472 20121219
US20140356653 20140507 US20170471160 20170328

Probable Assignee: CYTEC TECHNOLOGY CORP

Assignee(s): (std): CYTEC TECH CORP

Assignee(s): CYTEC TECHNOLOGY CORP ; CYTEC TECHNOLOGY CORP300 DELAWARE AVENUEWILMINGTONDE19801US ; FRULLONI EMILIANO ; HARRIMAN MARK EDWARD ; JORDAN NATALIE DENISE ; RESTUCCIA CARMELO LUCA ; LENZI FIORENZO ; SAJTEK TEKNOLODZHI KORP

Inventor(s): (std): HARRIMAN MARK EDWARD ; RESTUCCIA CARMELO LUCA ; JORDAN NATALIE DENISE ; LENZI FIORENZO ; FRULLONI EMILIANO ; NATALIE DENISE JORDAN ; EMILIANO FRULLONI ; CARMELO LUCA RESTUCCIA ; FIORENZO LENZI ; MARK EDWARD HARRIMAN ; KHARRIMAN MARK EDVARD ; LENTSI FIORENTSO ; DZHORDAN NATALI DENIZ ; RESTUCHCHA KARMELO LUKA

Inventor(s): LENZI FIORENZOIT ; JORDAN NATALIE DENISEGB ; FRULLONI EMILIANOGB ; RESTUCCIA CARMELO LUCAGB ; HARRIMAN MARK EDWARDGB

Agent(s): SPRUSON AND FERGUSON; PHILLIPS ORMONDE FITZPATRICK; SMART AND BIGGAR; CARPMAELS AND RANSFORD LLP; VANDE GUCHT ANNE; THI; DANG THI; DANG THI ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 6360195 (US4751146A)

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Title: PRINTED CIRCUIT BOARDS

Abstract: A heat resistant printed circuit board is disclosed which comprises a laminate of: (A) a thin-walled body having a thickness of from 0.2 μ m to less than 5 mm and containing a cross-linked product of a mixture of (a) 1 to 99 weight percent of an ethylenic copolymer (A) comprised of 30 to 99.5 weight percent of ethylene, and an oxirane ring-containing compound having at least one double bond and having 6 to 30 carbon atoms, and (b) 99 to 1 weight percent of an ethylenic copolymer (B) comprised of 30 to 99.5 weight percent of ethylene, and a comonomer selected from the group consisting of unsaturated monocarboxylic acids, unsaturated dicarboxylic acids, unsaturated dicarboxylic acid anhydrides, and half esters of unsaturated dicarboxylic acids; and (B) an electrically conductive metal layer having a thickness of from 100 $\text{\AA}$ to 400 μ m. The boards have excellent heat resistance, electrical insulating properties, flexibility, chemical resistance, dimensional stability, etc.

Classifications:

International (IPC 8-9): B32B15/08 B32B15/085 B32B27/28 D03D1/00 D04H1/42 D04H1/4342 D06M11/00 D06M11/83 D21H13/26 D21H19/02 H01B3/40 H01B3/44 H01B7/29 H05K1/03 H05K1/05 H05K3/00 H05K5/00 H05K7/14 (Advanced/Invention); D06M101/00 D06M101/16 D06M101/18 D06M101/20 D06M101/22 D06M101/34 D06M101/36 H05K1/00 (Advanced/Non-invention); B32B15/08 B32B27/28 D03D1/00 D04H1/42 D06M11/00 D21H13/00 D21H19/00 H01B3/40 H01B3/44 H01B7/17 H05K1/03 H05K1/05 H05K3/00 H05K5/00 H05K7/14 (Core/Invention); H05K1/00 (Core/Non-invention)

International (IPC 1-7): B32B15/00 B32B15/08 B32B27/08 B32B27/28 B32B3/00 C08L23/08 D03D1/00 D04H1/42 D06M11/00 D21H1/12 D21H5/20 H01B3/40 H01B3/44 H01B7/00 H01B7/34 H05K1/02 H05K1/03 H05K1/05 H05K5/00 H05K7/14

CPC: Y10S428/901 H05K3/0014 H05K1/0393 H05K1/0393 H05K3/0064 H05K2201/0129 H05K2203/1327 Y10T428/2933

Y10T428/294 Y10T428/2947 H01B3/44 H01B3/40 Y10T428/24917 Y10T428/1359 Y10T428/31692 Y10T428/31699 Y10T428/31743

PatBase - US4751146_A



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US: 156/245 156/901 174/110PM 174/110SR 174/120SR 174/256 174/68.5 264/325 428/209 428/339 428/35 428/35.9 428/375 428/379 428/383 428/461 428/463 428/475.8 428/901
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JP F-Index: B32B15/08/J B32B15/08/Z B32B15/08/103/Z B32B15/085/Z B32B27/28 H05K1/03 H05K1/03/630/D H01B3/44/D H01B7/29 H01B7/34/A D03D1/00/A D04H1/42/S D04H1/4342 D06M101:00 D06M101:16 D06M101:18 D06M101:20 D06M101:22 D06M101:34 D06M101:36 D06M11/00/A D06M11/83 D21H1/00/X D21H1/12 D21H13/26 D21H19/02 D21H5/20/E H05K1/03/610/J H05K1/03/610/U H05K1/03/D H05K1/03/630/E H05K1/03/650 H05K1/05/A H05K1/03/670/A H05K1/03/670/Z

Family:

Publication number	Publication date	Application number	Application date
DE0206179 T1	19870521	DE19860108137T	19860613
DE3663600 D1	19890629	DE19863663600	19860623
DE3688008 D1	19930422	DE19863688008	19860613
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Priority:

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Designated states: BE DE FR GB IT NL

Title: SISTEMA Y PROCESO DE PRODUCCION EN SERIE DE SUPERFICIES LAMINARES COMPLEJAS System AND PROCESS FOR PRODUCTION IN SERIES OF COMPLEX LAMINAR SURFACES (Machine translation)

Abstract: Source: CO20170013705A [ES] Sistema para produccion en serie de superficies laminares complejas que tiene un modulo de alistamiento; seguido de un modulo de preformado; seguido de un dispositivo formador; seguido de un modulo de secado; seguido de un dispositivo expulsor; donde el dispositivo formador esta compuesto por un molde que tiene una geometria analoga de la superficie compleja de la base formadora, donde la base formadora esta ajustada sobre un soporte de carcasa, en el interior del soporte de la carcasa estan los emisores de luz y los conductos de succion de formado y que estan agrupados por secciones de succion; el dispositivo expulsor sostiene temporalmente un molde de formado que se ajusta sobre esta base expulsora, que tiene medios de agarre y de expulsion por medio de conductos de succion y aire a presion. Ademas tiene el proceso de produccion relacionado. Los materiales aplicados en las superficies laminares complejas pueden ser papel, petalos, hojas, telas o similares, de forma independiente combinada aglutinadas con resinas organicas o inorganicas. **Machine translation:** System for series production of complex laminar surfaces having a modulus of recruitment; followed by a preformed passageway; followed by a forming device; followed by a drying module; followed by an ejector device; wherein the imaging device is composed of a mold having a geometry similar to the complex surface of the forming base, wherein the base is fitted on forming a support housing, inside the support of the housing are the light emitters and the suction ducts and that they are grouped by sections of suction; the ejector device temporarily holds a mold formed which is adjusted on the basis of the expeller, which has gripping means and Of expulsion by means of suction ducts and pressurized air. It also has the related production process. The materials applied in the complex laminar surfaces may be paper, petals, leaves, fabrics or the like, independently combined agglutinated with inorganic or organic resins.

Classifications:

International (IPC 8-9): B22C21/00 C08J5/00 C08J5/06 D06M10/00 D06M10/04 (Advanced/Invention)

PatBase - CO20170013705_A1

Figura 7B. Detalle A y B de la Figura 7A Expulsion.

Figura 8. Vista isométrica en explosivo del dispositivo expulsor.

Figura 9. Vista esquemática del corte transversal del producto terminado.

Figura 10. Vista isométrica ejemplo de un producto terminado (Luminaria) compuesto por dos secciones de una superficie compleja.

Figura 11. Cuadro de proceso de producción en serie de superficies complejas.

15

Family:

Publication number	Publication date	Application number	Application date
CO20170013705 A1	20180328	CO20170013705	20171228

Priority:

CO20170013705 20171228

Probable Assignee:

DELGADO SANCHEZ LUIS FERNANDO

Assignee(s): (std):

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Assignee(s):

LUIS FERNANDO DELGADO SANCHEZ

Inventor(s): (std):

DELGADO SANCHEZ LUIS FERNANDO

Inventor(s):

LUIS FERNANDO DELGADO SANCHEZ

Agent(s):

AIDA LUCIA CERTUCHE CANDELO

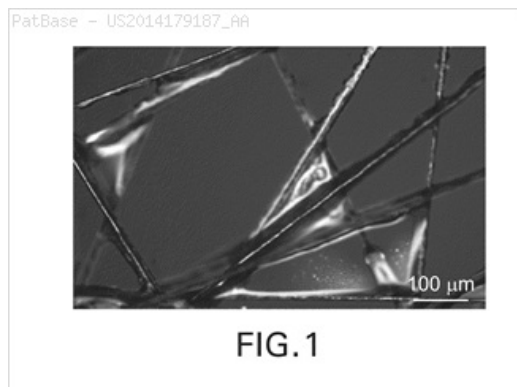
Title: LIQUID BINDER COMPOSITION FOR BINDING FIBROUS MATERIALS

Abstract: A liquid binder composition for binding fibrous materials in the fabrication of resin-infusible preform is disclosed. The binder composition is an aqueous dispersion containing (a) one or more multifunctional epoxy resins, (b) at least one thermoplastic polymer, (c) one or more surfactants selected from anionic surfactants, nonionic surfactants, and combinations thereof, (d) water, and is essentially free of organic solvents. Also disclosed is an emulsification process for producing the liquid binder composition.

Classifications:

International (IPC 8-9): B32B27/12 C08J5/04 C08K5/09 C08K5/42 C08K5/521 C08L101/00 C08L51/00 C08L53/00 C08L63/00 C08L71/02 C08L81/06 C09J11/06 C09J11/08 C09J163/00 C09J201/00 D04H5/04 D06M13/184 D06M13/256 D06M13/292 D06M13/46 D06M15/00 D06M15/53 D06M15/55 D06M15/63 (Advanced/Invention) **CPC:** C08L63/00 D06M15/55 D04H5/04 C09J163/00 C09J201/00 Y08L81/06 C08L51/00 C08L53/00 C08L101/00 Y10T442/2738 Y10T442/30 Y10T442/60

US: 442/149 442/181 442/327 523/435
JP F-Term: 4J002 4J002/AA01 4J002/AB01 4J002/BC03 4J002/BG06
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 4J002/CF16 4J002/CG01 4J002/CH05 4J002/CH07 4J002/CH09
 4J002/CK02 4J002/CL00 4J002/CL08 4J002/CM04 4J002/CN01
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 4J002/HA07 4L033 4L033/AB01 4L033/AB04 4L033/AC11 4L033/BA16
 4L033/BA28 4L033/BA39 4L033/BA85 4L033/CA32 4L033/CA48
 4L033/CA49 4L033/CA58 4J002/CD01 4J002/CD14 4J002/CH02
 4J002/EF03 4J002/EW04 4J002/FD32 4J002/GJ00 4J002/GK00
 4L033/AB03 4L033/AB05 4L033/AB07
JP F-Index: C08L101/00 C08L63/00/A D06M13/184 D06M13/256
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 C08K5/42 C08K5/521 C08L63/00/Z C08L71/02 C08L81/06



Family:

Publication number	Publication date	Application number	Application date
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AU2013364261 BB	20161124	AU20130364261	20130829
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RU2621764 C2	20170607	RU20150129529	20130829
TR201713854 T4	20171023	TR20170013854T	20130829
TW201425513 A	20140701	TW20130132839	20130911
TWI579359 B	20170421	TW20130132839	20130911
US2014179187 AA	20140626	US20130915651	20130612
US2018155542 AA	20180607	US20180885946	20180201
US9920197 BB	20180320	US20130915651	20130612
WO14099050 A1	20140626	WO2013US57197	20130829

Priority:

US20120739748P 20121220	US20130915651 20130612	AU20130364261 20130829
EP20130760197 20130829	JP20150549368T 20130829	WO2013US57197 20130829
AU20160277590 20161220	JP20170147711 20170731	US20180885946 20180201

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

12) Family number: 42521263 (WO08141201A1)

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Title: COMPOSITE MATERIALS

Abstract: Fiber reinforced thermoset plastic composites with a glass transition temperature of greater than 500 0C are disclosed. Certain embodiments of the disclosed fiber reinforced thermoset plastic composites are produced using pre-ceramic resin and fibers that are stable under thermal stress. Also disclosed are methods of making these fiber reinforced thermoset plastic

composites. These methods include infiltrating thermally stable fibrous material with a pre-ceramic resin and introducing crosslinking. The disclosed methods produce a non-ceramic highly crosslinked thermoset plastic composite that possesses both thermal stability and mechanical strength.

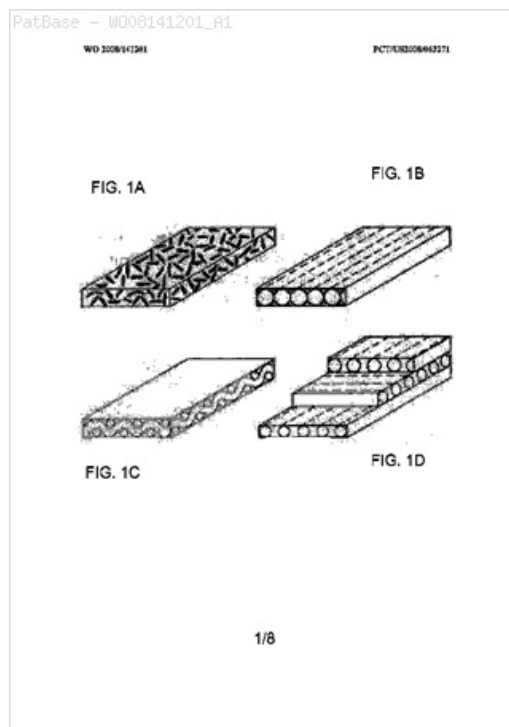
Classifications:

International (IPC 8-9): C08G77/62 C08J5/04

C08L101/00 (Advanced/Invention)

CPC: C08J5/04 C08J5/24 C08J2383/16

European: C08J5/04 C08J5/24 M08J383/16



Family:

Publication number	Publication date	Application number	Application date
WO08141201 A1	20081120	WO2008US63271	20080509

Priority:

US20070928746P 20070510

Probable Assignee: FISH CHRISTOPHER N

Assignee(s): (std): FISH CHRISTOPHER N ; GHIORSO FRANK

Inventor(s): (std): FISH CHRISTOPHER N ; GHIORSO FRANK

Agent(s): YOUNG TRAVIS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

13) Family number: 51083274 (US2012114973A)

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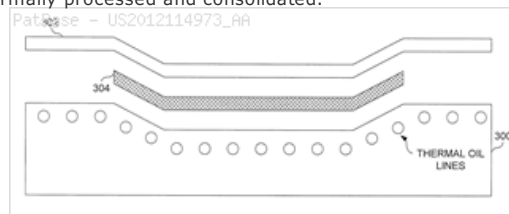
Title: THERMAL PROCESSING AND CONSOLIDATION SYSTEM AND METHOD

Abstract: A thermal processing and consolidation system is provided that includes an upper chamber assembly lower chamber assembly, layup and demolding station, transfer assembly, automatic or permanent coupling system, and controller. The upper and lower chamber assemblies are coupled to form an enclosed plenum operable to maintain a pressurized environment about a tool. The layup and demolding station receives the tool and facilitates the layup, bagging and sealing of unprocessed components at the tool. A transfer assembly accurately positions the tool on the lower chamber assembly in alignment with the upper chamber assembly. An automatic or permanent coupling system provides services to the tool and the enclosed plenum. A controller directs services to be supplied to the enclosed plenum and tool in accordance with a set of process parameters. This set of process parameters allows an individual set of unprocessed components to be thermally processed and consolidated.

Classifications:

International (IPC 8-9): B23P19/00 B29C B29C31/00 B29C33/02 B29C33/04 B29C35/00 B29C35/02 B29C35/04 B29C43/02 B29C43/12 B29C43/18 B29C43/32 B29C43/34 B29C43/52 B29C43/58 B29C51/42 B29C70/00 B29C70/06 B29C70/12 B29C70/44 B32B B32B1/00 B32B15/00 B32B15/01 B32B15/02 B32B15/04 B32B17/02 B32B18/00 B32B27/00 B32B37/00 B32B37/06 B32B37/10 B32B37/14 B32B5/02 B32B5/26 B32B5/28 B65B5/04 (Advanced/Invention); B29C31/00 B29C35/00 B29K105/08 B29K307/04 (Advanced/Non-invention); B29C (Subclass/Invention)

CPC: B29C33/04 B29C70/00 B65B5/04 B32B37/10 B32B37/06 B32B37/14 B29C35/0294 B29C31/006 B29C35/02 B29C35/0227 B29C70/443 B32B1/00 B32B5/26 B32B5/28 B32B2250/20 B32B2260/023 B32B2260/046 B32B2262/02 B32B2262/101 B32B2262/103 B32B2262/105 B32B2262/106 B32B2305/076 B32B2305/18 B32B2305/77 B32B2307/416 B32B2605/08 B32B2605/18 Y10T29/49801 Y10T29/53096 Y10T29/53313 Y10T428/12493 Y10T428/12986 Y10T428/239 Y10T428/24992 Y10T428/249921 Y10T428/31678 B29C35/04 B29C33/02 B29C35/007 B29C51/428 B29C70/12 B29K2307/04 B29C70/44 B32B37/0046 B32B37/1018 **European:** B29C35/02 B29C35/02C B29C70/12 B29C70/44 B29C70/44A B32B1/00 B32B5/26 B32B5/28 L29C31/00M L29C35/00B L29K307/04 L32B250/20 L32B260/02A1 L32B260/04C L32B262/02 L32B262/10A L32B262/10B L32B262/10D L32B262/10D2 L32B305/07B L32B305/18 L32B305/77 L32B307/416 L32B605/08 L32B605/18



US: 1/1 156/286 165/61 264/101 264/102 264/102S 264/241 264/297.7 264/319 264/319S 264/325 264/40.1 264/40.6 264/40S 264/490 264/493 264/511 264/553 29/419.1 29/722 29/771 425/144 425/436.00RS 425/436R 428/218 428/218S 428/221 428/221S 428/426 428/426S 428/428 428/428S 428/433 428/433S 428/450 428/450S 428/457 428/457S 428/615 428/615S 428/686 428/686P 428/76 53/467

JP F-Term: 4F204/AC03 4F204/AG03 4F204/AJ08 4F204/AM28 4F204/FA01 4F204/FA13 4F204/FA15 4F204/FB01 4F204/FN11 4F204/FN15 4F204/FN17 4F204/FQ01 4F204/FQ37 4F204/FQ38 4F205 4F205/AC03 4F205/AD03 4F205/AD16 4F205/AG03 4F205/AJ08 4F205/AM28 4F205/HA09 4F205/HB01 4F205/HB11 4F205/HF01 4F205/HK31 4F204/AA36 4F204/AR02 4F204/AR06 4F204/FG09 4F202 4F202/AA36 4F202/AB18 4F202/AD16 4F202/AH18 4F202/AJ12 4F202/AR06 4F202/CA09 4F202/CB01 4F202/CN01 4F202/CN05 4F202/CN13 4F202/CN15 4F202/CN24 4F204/AD02 4F204/AD16 4F204/AH18 4F204/AJ12 4F204/FH06 4F204/FH09 4F204/FQ15 4F204/AD03 4F204/AD05 4F204/AD08 4F204/AD20 4F204/AD35 4F204/FF01 4F204/FG02 4F204/AA39 4F204/AR11 4F204/AH17 4F204/AH31 4F204/FF23 4F204/FQ11

JP F-Index: B29C43/02 B29C43/18 B29C43/32 B29C67/14/J B29C70/28 B29C70/48 B29K105/08 B29C43/12 B29C43/52 B29C33/02 B29C43/34 B29C70/34 B29C70/00 B29C70/16 B29C70/44 B29C43/58 B29L31/30

Family:

Publication number	Publication date	Application number	Application date
BR112013010982 A2	20170606	BR20131110982	20111104
CA2854615 AA	20140505	CA20112854615	20111104
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CN103492163 A	20140101	CN201180064249	20111104
CN103492163 B	20160629	CN201180064249	20111104
CN106079479 A	20161109	CN201610451353	20111104
DE602012028932 D1	20170406	DE201260028932T	20120730
EP2635428 A2	20130911	EP20110787970	20111104
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HK1231017 A1	20171215	HK20170104562	20170508
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JP2014500164 T2	20140109	JP20130537887T	20111104
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US2012114973 AA	20120510	US20110290867	20111107
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US2017297233 AA	20171019	US20160292228	20161013
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WO12061768 A2	20120510	WO2011US59434	20111104
WO12061768 A3	20120823	WO2011US59434	20111104
WO12075252 A1	20120607	WO2011US62836	20111201
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Priority:

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US20110574151P	20110728	CN201180064249	20111104	JP20130537887T	20111104
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JP20130542170T	20111201	US20110991035	20111201	WO2011US62836	20111201
EP20120745746	20120730	WO2012US48832	20120730	US20120232723	20120730
US20140232723	20140114	US20140158510	20140117	JP20160095208	20160511
US20160292228	20161013	JP20160253528	20161227	JP20180142049	20180730

Probable Assignee: LIGHTWEIGHT LABS LLC

Assignee(s): (std): GLOBE MACHINE MFG COMPANY ; JACOBSEN RONALD M ; LIGHTWEIGHT LABS LLC ; PELC ANTONIN ; WARRICK RUSSELL CARVER ; MURCH ROBERT W ; PLASAN CARBON COMPOSITES INC ; LOWNSDALE GARY R ; BAMFORD JR CALVIN D ; BARTOLOTTI DOUGLAS L ; COOKE TERRANCE WILLIAM ; CROSTON VICTOR WAYNE ; GLOBE MACHINE MFG CO

Assignee(s): GLOBE MACHINE MANUFACTURING COMPANY ; BAMFORD CALVIN D JR ; FIRST MIDWEST BANK ADMINISTRATIVE AGENT AS ; LIGHTWEIGHT LABS LLC701 EAST D STREETTACOMAWA98421US ; PLASAN CARBON COMPOSITES INC BENNINGTON

Inventor(s): (std): JACOBSEN RONALD M M ; BAMFORD JR CALVIN D D ; ANTONIN PELC ; VICTOR WAYNE CROSTON ; RUSSELL CZRVER WARRICK ; WARRICK RUSSELL CARVER ; PELC ANTONIN ; BAMFORD JR CALVIN D ; CROSTON VICTOR WAYNE ; COOKE TERRANCE WILLIAM ; JACOBSEN RONALD M ; CARVIN D BAMFORD JR ; TERRANCE WILLIAM COOKE ; RONALD M JACOBSEN ; ROBERT W MURCH ; GARY R LOWNSDALE ; MURCH

Inventor(s): ROBERT W ; LOWNSDALE GARY R ; BARTOLOTTI DOUGLAS L ; BAMFORD CALVIN D JR ; CALVIN D BAMFORD JR ; RUSSELL CARVER WARRICK MURCH ROBERT W WIXOM ; LOWNSDALE GARY R LOUDON ; BARTOLOTTI DOUGLAS L GRAND RAPIDS ; BAMFORD CALVIN D JRUS ; COOKE TERRANCE WILLIAMUS ; PELC ANTONINUS ; JACOBSEN RONALD MUS ; CROSTON VICTOR WAYNEUS ; WARRICK RUSSELL CARVERUS ; BAMFORD CALVIN D

Agent(s): MOFFAT AND CO; KRAUS AND WEISERT PATENTANWAELTE PARTGMBB; LIESEGANG EVA; NEILSON MARTIN MARK; CHINA PATENT AGENT HK LTD; OHNUKI SHINSUKE; ITOH TADAHIKO; ITOH TADASHIGE; LOWE HAUPTMAN AND HAM LLP; HAUPTMAN HAM LLP; HOWARD AND HOWARD ATTORNEYS PLLC; HAUPTMAN BENJAMIN J; KAPP JULIE A ET AL; FRANCIS CHRISTOPHER M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

14) Family number: 49370280 (US2011286222A)

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Title: METHOD OF MANUFACTURING AN OPTICAL COMPOSITE

Abstract: Embodiments of this invention include composite articles having specific optical properties. In one embodiment of this invention, a composite comprises high and low refractive index light transmitting material and surface relief features. In further embodiments, the composite comprises volumetric dispersed phase domains that may be asymmetric in shape. In one embodiment of this invention, the composite is an optical film providing light collimating features along two orthogonal planes perpendicular to the surface of the film. In another embodiment, the composite has improved optical, thermal, mechanical, or environmental properties. In further embodiments of this invention, the composite is manufactured by optically coupling or extruding two or more light transmitting materials, and forming inverted light collimating surface relief features or light collimating surface relief features. In further embodiments of this invention, a method of manufacturing a composite comprises forming one or more surface relief features on a component and injection molding or otherwise optically coupling two or more materials to the component. In one or more embodiments of this invention a light source is optically coupled to the composite or used in a light emitting device.

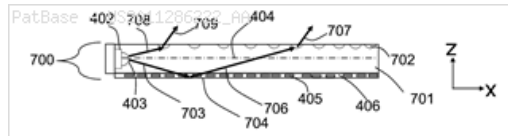
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International (IPC 8-9): B29D11/00 F21V5/00 G02B6/00 G02B6/10 G02F1/1333 G09F13/04 (Advanced/Invention)

CPC: Y10T156/1039 B29D11/0073 G02B6/0036 G02B6/0041 G02B6/0046 G02B6/0055 G02B6/0058 G02B6/0065 G02F1/133615

European: B29D11/00H G02B6/00L6O4B G02B6/00L6P S02B6/00L6O16 S02B6/00L6O4P2 S02B6/00L6O4S4 S02B6/00L6O8R S02F1/1336E

US: 156/219 156/219S 264/1.24 264/1.27 264/1.34 264/1.7 264/494 349/56 349/57 349/58 349/61 362/326 362/326P 362/97.1 362/97.2 385/129 385/130 385/131 385/141 385/141S 385/33 385/36



Family:

Publication number	Publication date	Application number	Application date
US2011286222 AA	20111124	US20110163938	20110620
US7991257 BA	20110802	US20080209709	20080912
US8249408 BB	20120821	US20110163938	20110620

Priority:

US20070872446P 20070516 US20080122661 20080516 US20080209709 20080912
US20110163938 20110620

Probable Assignee: MASSACHUSETTS DEVELOPMENT FINANCE AGENCY

Assignee(s): (std): COLEMAN ZANE ; FUSION OPTIX INC

Assignee(s): MASSACHUSETTS DEVELOPMENT FINANCE AGENCY ; CREE INC

Inventor(s): (std): COLEMAN ZANE

15) Family number: 30909305 (US6995099B)

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Title: COMPOSITE REINFORCING FIBER BASE MATERIAL, PREFORM AND PRODUCTION METHOD FOR FIBER REINFORCED PLASTIC

Abstract: The present invention is aimed at providing FRP formed by integrating a fiber reinforcing material and a non-woven fabric, and having excellent shaping ability, impact resistance after molding, and excellent reliability and low cost.

Classifications:

International (IPC 8-9): B29B11/16 B29C43/12 B29C43/34 B29C70/08 B29C70/22 B29C70/42 B29C70/44 B32B3/10 B32B5/02 B32B5/26 B32B5/28 B32B9/00 D01F9/14 (Advanced/Invention);

B29K105/06 B29K105/08 B29K77/00 B29L9/00 (Advanced/Non-invention); B29C70/04 B29C70/08 B29C70/10 B32B3/10 B32B5/02 B32B5/22 B32B9/00 (Core/Invention)

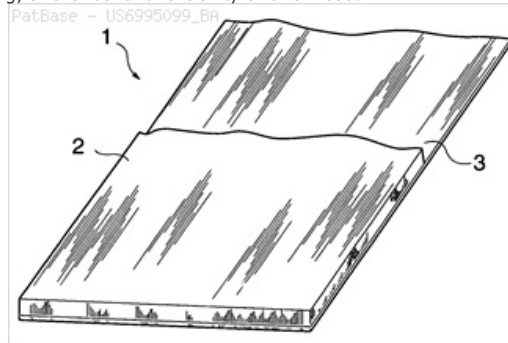
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CPC: B32B5/10 B32B7/08 B32B2262/02 B32B2307/558 B29C70/083 B29C70/22 B29C70/226 Y10T428/24124 Y10T428/2929 B29B11/16 Y10T442/20 Y10T442/2008 Y10T442/2016 Y10T442/2984 Y10T442/30 Y10T442/637 Y10T442/641 Y10T442/681 Y10T442/69 D04H3/002 D04H3/115 D04H1/498 D04H1/559 D04H1/593 D04H3/04 B32B5/024 B32B7/12 B32B2262/0269 B32B2605/18 B32B5/26 B29C70/443 B32B5/022 B32B5/06 B32B5/08 B32B2262/0261 B32B2262/106 B32B2262/12

European: B29C70/08B B29C70/22 B29C70/22C B29C70/44A B32B5/26 B32B5/28

US: 428/113 428/373 442/179 442/181 442/361 442/364 442/401 442/409 442/59 442/60 442/61

JP F-Term: 4F072 4F072/AA02 4F072/AA04 4F072/AA07 4F072/AB06 4F072/AB10 4F072/AB22 4F072/AB29 4F072/AD24



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JP F-Index: B29B11/16 B29C43/12 B29C43/34 B29C70/12 B29C70/44 B29C70/48 B29K105/06 B29K105/08 B29K77/00
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B32B5/28/A B32B5/28/Z

Family:

Publication number	Publication date	Application number	Application date
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AU760808 B2	20030522	AU20000025764	20000222
CA2333151 AA	20001122	CA20002333151	20000222
CA2333151 C	20090818	CA20002333151	20000222
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JP4947163 B2	20120606	JP20100029685	20100215
US6995099 BA	20060207	US20000700084	20001109
WO0056539 A1	20000928	WO2000JP00989	20000222

Priority:

JP19990077557 19990323 JP19990106846 19990414 EP20000904083 20000222
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Probable Assignee: TORAY IND INC

Assignee(s): (std): HIRABARA TAKEHIKO ; HOMMA KIYOSHI ; HORIBE IKUO ; NISHIMURA AKIRA ; TORAY IND ; TORAY INDUSTRIES ; TORAY INDUSTRIES INC

Assignee(s): TORAY IND INC

Inventor(s): (std): AKIRA NISHIMURA ; HIRABARA TAKEHIKO ; HOMMA KIYOSHI ; HORIBE IKUO ; IKUO HORIBE ; KIYOSHI HOMMA ; NISHIMURA AKIRA ; TAKEHIKO HIRABARA ; HONMA KIYOSHI ; HIRAHARA TAKEHIKO

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; LEINWEBER AND ZIMMERMANN; WEBSTER JEREMY MARK; MORRISON AND FOERSTER LLP

Designated states: AT AU BE CA CH CY DE DK ES FI FR GB GR IE IT JP LU MC NL PT SE US

16) Family number: 11271315 (EP0834598A1)

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Title: Selective metallization of three dimensional objects

Abstract: A method for coating an irregularly shaped article with metal in a discrete pattern. The method uses double molding procedures where one molding covers a portion of another molding. A thermally decomposable organometallic complex of a metal catalytic to electroless metal deposition may be incorporated into the first or second molding or coated over the surface of either. The molding temperature decomposes the organometallic complex yielding a catalytic surface which may be metallized by immersion in an electroless metal plating solution.

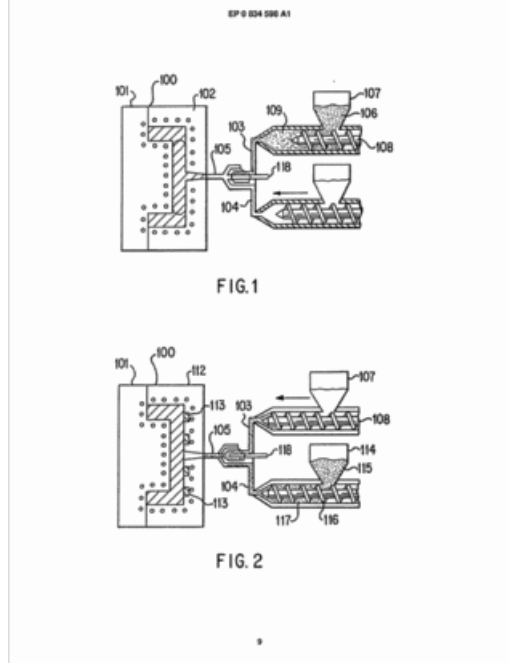
Classifications:

International (IPC 8-9): C23C18/16 H05K3/18 (Advanced/Invention)

International (IPC 1-7): C23C18/16

CPC: C23C18/1605 H05K2203/121 H05K3/182

European: C23C18/16B2 H05K3/18B2 T05K203/12A

**Family:**

Publication number	Publication date	Application number	Application date
EP0834598 A1	19980408	EP19970115716	19970910

Priority:

US19960726608 19961007

Probable Assignee: SHIPLEY CO LLC**Assignee(s):** (std): SHIPLEY CO LLC**Assignee(s):** SHIPLEY COMPANY L L C**Inventor(s):** (std): GOOSEY MARTIN T ; HUNTER PHILIP A ; TABINOR IVAN T**Designated states:** DE FR GB IT**17) Family number: 51077337** (US2013269159A)

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Title: NOVEL COMPOSITE PARTS, METHODS AND APPARATUS FOR MANUFACTURING THE SAME**Abstract:** Described is a method of forming a textile perform for a mold having a complex curvature.**Classifications:****International (IPC 8-9):** B29B11/16 D03D3/00 D04B1/22

D04C1/06 (Advanced/Invention)

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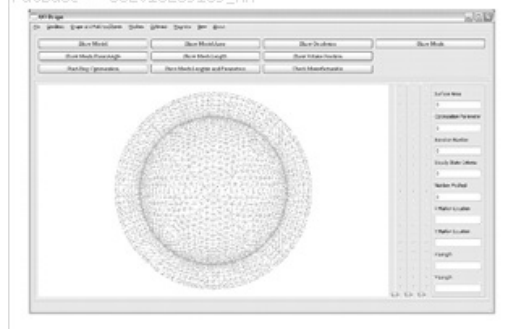
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N10B505/02

US: 28/143

PatBase - US2013269159_AA

**Family:**

Publication number	Publication date	Application number	Application date
CA2815968 AA	20130425	CA20112815968	20111103
US2013269159 AA	20131017	US20110882244	20111103
WO12059886 A1	20120510	WO20111B54907	20111103

Priority:

US20100409610P 20101103

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WO20111B54907 20111103

Probable Assignee: OF OTTAWA UNIV**Assignee(s):** (std): BURNFORD NICHOLAS ; BURNFORD NICHOLAS P ; ROBITAILLE FRANCOIS F ; UNIV OTTAWA**Assignee(s):** UNIVERSITY OF OTTAWA ; OF OTTAWA UNIV**Inventor(s):** (std): ROBITAILLE FRANCOIS F ; BURNFORD NICHOLAS ; BURNFORD NICHOLAS P

Agent(s): RIDOUT AND MAYBEE LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

18) Family number: 50908340 (US2013209819A)

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Title: DECORATIVE SHEET AND DECORATIVE MOLDED PRODUCT

Abstract: Provided are a decorative sheet and a decorative molded product with excellent productivity that impart the decorative molded product with superior stain resistance and moldability. The decorative sheet and the decorative molded product sequentially have a releasable layer and a surface protecting layer on one side of a base sheet, the surface protecting layer composed of an ionizing radiation-curable resin composition containing a polyfunctional (meth)acrylate monomer and a thermoplastic resin with a molecular weight of 175 to 1000, the thermoplastic resin having a predetermined weight average molecular weight, and the polyfunctional (meth)acrylate monomer and the thermoplastic resin being of predetermined mass ratios.

Classifications:

International (IPC 8-9): B32B27/00 B32B27/06 B32B27/30 B32B33/00 B32B7/12 B44C1/165 B44C3/02 C08F2/44 C08F265/06 C09D133/00 C09D133/10 C09D201/00 C09D4/00 (Advanced/Invention)

CPC: C09D133/10 B32B27/308 B32B27/16 B32B38/0008 B32B2038/0076 B32B2250/42 B32B2270/00 B32B2451/00 Y10T428/31935 B29C45/14811

US: 428/522

JP F-Term: 4F100 4F100/AK01 4F100/AK25 4F100/AR00 4F100/BA03

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4J011/AA05 4J011/AC04 4J011/CA08 4J011/CB02 4J011/CC04

4J011/CC10 4J011/PA69 4J011/QA22 4J011/QA25 4J011/UA03

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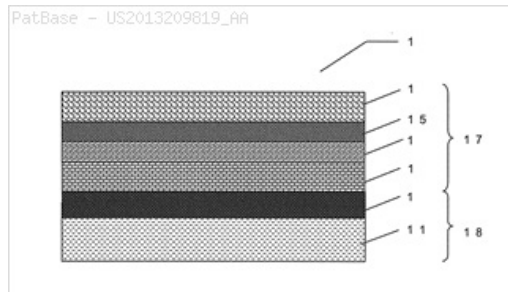
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4J038/FA21 4J038/FA22 4J038/KA04 4J038/MA14 4J038/NA05 4J038/PA17 4J038/PC08

JP F-Index: B32B27/30/A B32B33/00 C08F2/44/C C08F265/06 B32B27/00/E B32B27/00/L C09D133/00 C09D201/00 C09D4/00



Family:

Publication number	Publication date	Application number	Application date
CN103167955 A	20130619	CN201180046745	20110929
CN103167955 B	20160511	CN201180046745	20110929
EP2623316 A1	20130807	EP20110829301	20110929
EP2623316 A4	20160817	EP20110829301	20110929
JP2012091497 A2	20120517	JP20110206016	20110921
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JP5831086 B2	20151209	JP20110206016	20110921
JP5831087 B2	20151209	JP20110206019	20110921
KR101888708 B1	20180814	KR20137007576	20110929
KR20130140648 A	20131224	KR20137007576	20110929
US2013209819 AA	20130815	US20110876480	20110929
WO12043748 A1	20120405	WO2011JP72430	20110929

Priority:

JP20100219098 20100929 JP20110206016 20110921 JP20110206019 20110921
WO2011JP72430 20110929

Probable Assignee: DAINIPPON PRINTING CO LTD

Assignee(s): (std): ATAKE HIROYUKI ; DAINIPPON PRINTING CO LTD ; MEIKI YOSHIYUKI ; TAKANO MARI ; NODA AKIHISA

Assignee(s): DAI NIPPON PRINTING CO ; DAI NIPPON PRINTING CO LTD ; DAINIPPON PRINTING CO

Inventor(s): (std): MEIKI YOSHIYUKI ; ATAKE HIROYUKI ; TAKANO MARI ; NODA AKIHISA ; NODA AKITOSHI ; NAGI YOSHIYUKI

Agent(s): LAMB MARTIN JOHN CARSTAIRS; TACHIBANA KENJI; TANAKA JUNYA; OHTANI TAMOTSU ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

19) Family number: 49714344 (US2011247523A)

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Title: ORGANIC-INORGANIC COMPOSITE PARTICLES, PARTICLE DISPERSION, PARTICLE-DISPERSED RESIN COMPOSITION, AND METHOD FOR PRODUCING ORGANIC-INORGANIC COMPOSITE PARTICLES

Abstract: The organic-inorganic composite particles can be dispersed as primary particles in a solvent and/or a resin and have a plurality of mutually different organic groups on the surface of inorganic particles.

Classifications:

International (IPC 8-9): B01J31/04 B01J31/06 B01J31/22 B01J31/26 B01J31/28 B01J31/34 B01J31/38 B01J35/02 B01J37/00 B01J37/10

B82Y30/00 C01B13/14 C01F11/18 C01F11/46 C01F17/00 C01G23/00
C01G23/04 C01G23/047 C01G23/053 C07C59/01 C07F19/00 C07F3/00
C07F5/00 C07F7/28 C08J3/12 C08J3/14 C08J5/22 C08J9/26 C08K3/10
C08K3/26 C08K5/057 C08K5/09 C08K9/04 C08L101/00 C09C3/08
C09D201/00 C09D5/16 C09D7/12 H01M8/10 H01M8/1041
H01M8/1048 (Advanced/Invention);
C07F7/28 (Advanced/Non-invention)
CPC: C07F9/3808 C07F9/4006 C09C1/02 C09C3/08 C07F5/00 C07F7/28
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C01P2004/61 C01P2004/62 H01M8/1048 C01G23/003 B01J31/2221
B01J2231/005 B01J2531/46 B01J2531/66 C07F3/00 B01J31/28 B01J31/26
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H01M2300/0091 C08J5/2206 C01F11/183 C07F3/003 C07F5/003
European: C07F5/00B C07F9/38A1 C07F9/40A1 C08J3/12 C08J5/22B
M01P4/03 M01P4/04 M01P4/10 M01P4/51 M01P4/54 M01P4/60
M08J300/12
US: 106/447 106/463 106/471 106/471S 106/505 106/505S 429/479
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JP F-Term: 4G047 4G047/CA01 4G047/CA02 4G047/CB05 4G047/CB08
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C01B13/14/A C01F11/18/M C01G23/00/B C08K3/26 C01G23/00 C01G23/04/B C07C59/01/CSP C07F7/28/F C08J9/26
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JP Facet: CER CEZ

PatBase - W011129311_A1

【図1】

AA 実施例1-1のFE-SEM写真

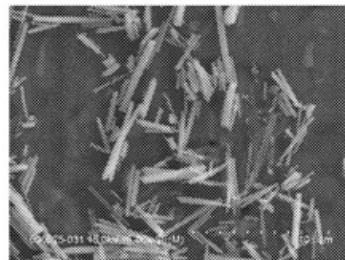


FIG. 1:
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EMBODIMENT 1-1

Family:

Publication number	Publication date	Application number	Application date
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CN102822098 A	20121212	CN201180017265	20110411
CN102822098 B	20151125	CN201180017265	20110411
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US10265693 BB	20190423	US20170466279	20170322
WO11129308 A1	20111020	WO2011JP59033	20110411
WO11129311 A1	20111020	WO2011JP59040	20110411

Priority:

JP20100091577	20100412	JP20100172306	20100730	JP20100172309	20100730
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Probable Assignee: NITTO DENKO CORP

Assignee(s): (std): EMORI HIDEYUKI ; FUKUOKA TAKAHIRO ; FUKUZAKI SAORI ; HATAKEYAMA YOSHIHARU ; NAGASE JUNICHI ; NITTO DENKO CORP ; UNIV TOHOKU ; SHIBATA SHUSAKU ; NAGATSUKA TATSUKI ; SHIBATA SYUSAKU ; NISHII HIROYUKI

Assignee(s): TOHOKU UNIV

Inventor(s): (std): NAGASE JUNICHI ; FUKUZAKI SAORI ; SHIBATA SHUSAKU ; HATAKEYAMA YOSHIHARU ; FUKUOKA TAKAHIRO ; NAGATSUKA TATSUKI ; AJIRI TADAFUMI ; SHIBATA SYUSAKU ; EMORI HIDEYUKI ; NISHII HIROYUKI ; HATAKEYAMA YOSHIJI ; AJIRI MASAFUMI ; YAMAMOTO SAORI

Inventor(s): YOSHIHARU HATAKEYAMA ; JUNICHI NAGASE ; TATSUKI NAGATSUKA ; TAKAHIRO FUKUOKA ; SAORI FUKUZAKI ; SHUSAKU SHIBATA ; TADAFUMI AJIRI

Agent(s): SUGHRUE MION PLLC; OKAMOTO HIROYUKI

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

20) Family number: 11280515 (WO9900235A1)

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Title: IN MOLD BONDED COMPOSITES AND A METHOD FOR MANUFACTURING THE COMPOSITES

Abstract: This invention relates to a decorative and/or architectural composite article fabricated from a resin matrix (22) bound to a substrate (24). The resin matrix primarily contains a curable liquid resin, metal or stone particles, and a catalyst. The composite piece has the appearance of metal or stone and the utility of a piece of plywood, particle board, or other building panel. This invention also relates to a process for fabricating the composite pieces.

Classifications:

International (IPC 8-9): B29C70/60 B44C5/04 B44F9/02 B44F9/10

E04F13/08 (Advanced/Invention);

B29C70/00 B44C5/00 B44F9/00 E04F13/08 (Core/Invention)

International (IPC 1-7): B29C41/22 B32B23/08 B32B27/30 B32B27/36

B32B27/38 B32B27/40 B32B31/10 B32B5/16

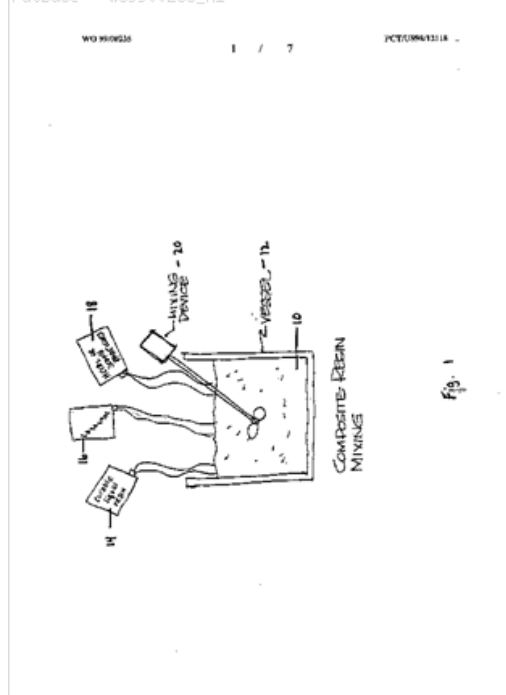
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European: B29C70/60C B44C5/04 B44C5/04N B44F9/02 B44F9/10

E04F13/08K

PatBase - W09900235_A1



Family:

Publication number	Publication date	Application number	Application date
AU199878360 A1	19990119	AU19980078360	19980610
WO9900235 A1	19990107	WO1998US12118	19980610

Priority:

US19970882874	19970626	WO1998US12118	19980610
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Probable Assignee: QUESTECH CORP

Assignee(s): (std): QUESTECH CORP

Inventor(s): (std): MERRIAM BRENT ; PELLETIER DAVID ; QUESTEL ROGER

Inventor(s): ROGER QUESTEL ; DAVID PELLETIER ; BRENT MERRIAM

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

21) Family number: 12282548 (US4976813A)

© PatBase

Title: PROCESS FOR USING A COMPOSITION FOR A SOLDER MASK

Abstract: This invention relates to a solder mask composition for thermoplastic substrates. The solder mask has critical components which include a polyhydroxyether and melamine formaldehyde. Other components include a solvent, filler and flow control agent. Optional ingredients include a colorant, epoxy resin and acid to promote the reaction of the composition. A surfactant can also be included. The solder mask provides the necessary flexibility and adhesion required for thermoplastic circuit boards. The mask can be applied directly to a circuit board or to a transfer medium for subsequent covering of a substrate. It relates to an article which can be a circuit board. It also relates to a process for making such composites which includes processing the solder mask.

Classifications:

International (IPC 8-9): B23K1/00 C08G59/00 C08G59/40 C08G59/68 C08J5/18 C08J7/02 C08J7/04 C08L61/10 C08L61/20 C08L61/28 C08L63/00 C08L71/00 C08L71/02 C09J11/08 C09J5/02 C09K3/00 H05K1/02 H05K3/00 H05K3/20 H05K3/28 H05K3/34

H05K3/38 (Advanced/Invention);

H05K1/09 H05K3/28 (Advanced/Non-invention);

C08L71/00 H05K3/20 H05K3/34 (Core/Invention);

H05K1/09 H05K3/28 (Core/Non-invention)

International (IPC 1-7): B23K1/00 B29C71/00 B32B31/12 B44C1/17

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US: 106/311 156/230 156/240 156/249 156/281 156/309.3 156/330 156/83 174/257 252/364 252/511 252/514 264/341 29/829 427/259 427/96 427/97.5 428/901

JP F-Term: 4E076 4E080 4H016 4J002 4J002/CC18/2 4J002/CD05/3 4J002/CD06/3 4J002/CH02/1 4J002/DG04/7 4J002/DJ01/8 4J002/DJ04/7 4J002/DJ05/7 4J002/EH15/6 4J002/EU02/9 4J002/EV24/9 4J002/FD01/7 4J002/FD09/9 4J002/FD20/0 4J002/FD20/3 4J002/FD20/6 4J002/FD20/8 4J002/FD20/9 4J036 4J036/AD08 4J036/AF06 4J036/DD04 4J036/FA04 4J036/FA05 4J036/FA10 4J036/FA11 4J036/FA12 4J036/FB09 4J036/FB12 4J036/GA28 4J036/JA10 5E314 5E314/AA25 5E314/AA26 5E314/AA27

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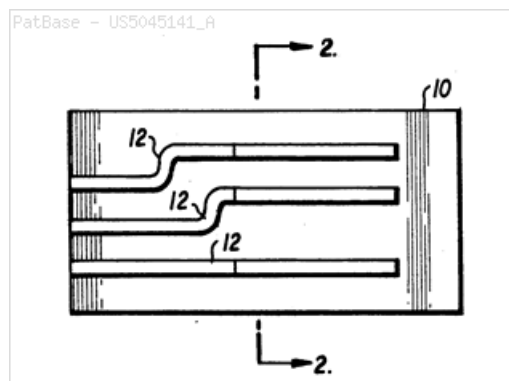
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JP F-Index: B23K1/00/W C08G59/00 C08G59/40 C08G59/68 C08L61/20 C08L63/00/A C08L71/02 C09K3/00/R

H05K3/20/C H05K3/28/C C08J5/18 C08J7/04/E C09J5/02

JP Facet: CEZ JGP



Family:

Publication number	Publication date	Application number	Application date
CA2031489 AA	19901220	CA19902031489	19900417
CA2031516 AA	19901220	CA19902031516	19900417
EP0422213 A1	19910417	EP19900908011	19900417
EP0422213 A4	19920311	EP19900908011	19900417
EP0431095 A1	19910612	EP19900907707	19900417
JP3506101 T2	19911226	JP19900507786T	19900417
JP6501965 T2	19940303	JP19900506837T	19900417
US4976813 A	19901211	US19890343744	19890427
US5039472 A	19910813	US19890343745	19890427
US5045141 A	19910903	US19880214380	19880701
WO9012695 A1	19901101	WO1990US02137	19900417
WO9012846 A1	19901101	WO1990US02140	19900417

Priority:

US19880214380 19880701 US19890343744 19890427 US19890343745 19890427
WO1990US02140 19900417 WO1990US02137 19900417

Probable Assignee: AMOCO CORP

Assignee(s): (std): AMOCO CORP

Assignee(s): SALENSKY GEORGE A ; THOMAN THOMAS S ; AMOCO A CORP OF IN CORP ; AMOCO CHICAGO ILLINOIS A CORP OF INDIANA CORP

Inventor(s): (std): RIMSA STEPHEN B ; SALENSKY GEORGE ANTHONY ; THOMAN THOMAS STEVEN ; THOMAN THOMAS S ; SALENSKY GEORGE A

Agent(s): GOWLING LAFLEUR HENDERSON LLP

Designated states: AT BE CA CH DE DK ES FR GB IT JP LI LU NL SE

Title: METHOD FOR MANUFACTURING A GLASS FIBER REINFORCED ARTICLE, AND A GLASS FIBER REINFORCED ARTICLE

Abstract: A glass fiber reinforced article can be manufactured by: applying a mixture of glass fiber and binder over a mold surface of a first mold section to form a glass fiber matrix, wherein the binder comprises an organic solvent based binder capable of holding the glass fiber in place at room temperature; closing a second mold section over the first mold section to form a plenum between the first mold section and the second mold section, wherein the glass fiber matrix is provided in the plenum between the first mold section and the second mold section; injecting a reactive polymer forming composition into the plenum; and allowing the reactive polymer forming composition to react and form a thermoset resin. A glass fiber reinforced article is provided according to the invention.

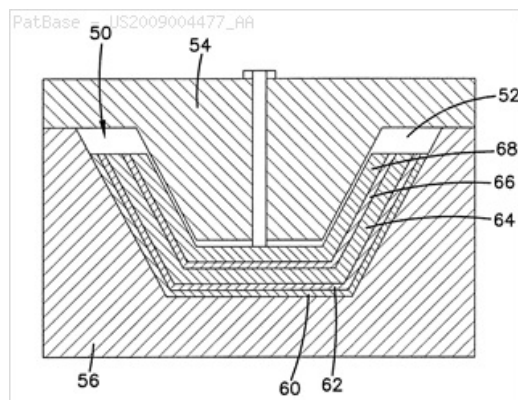
Classifications:

International (IPC 8-9): B27N3/10 B28B1/00 B29C45/14 B29C45/16 B32B27/00 B32B27/20 B32B5/14 B63B3/00 (Advanced/Invention); B27N3/08 B28B1/00 B29C45/14 B29C45/16 B32B27/00 B32B27/20 B32B5/14 B63B3/00 (Core/Invention)

CPC: B29C70/48 B29C70/12 Y10T428/31507 Y10T428/31554 Y10T428/31565 Y10T428/31725 Y10T428/31786

European: B29B11/16 B29C70/12 B29C70/48

US: 114/355 264/112 264/112P 264/241 264/241S 264/255 264/257 264/257S 264/258 264/308 264/308S 264/309 264/328.6 428/412 428/412P 428/423.3 428/423.300S 428/423.7 428/423.700S 428/426 428/426S 428/474.4 428/474.400S 428/480 428/480S



Family:

Publication number	Publication date	Application number	Application date
US2009004477 AA	20090101	US20070770866	20070629
US2010154698 AA	20100624	US20100658981	20100217
US2011115113 AA	20110519	US20110012232	20110124
US7691311 BB	20100406	US20070770866	20070629
US7875225 BB	20110125	US20100658981	20100217
US8147741 BB	20120403	US20110012232	20110124
WO08134369 A1	20081106	WO2008US61290	20080423

Priority:

US20070007921P 20070427 US20070770866 20070629 US20100658981 20100217
US20110012232 20110124

Probable Assignee: WABASH NATIONAL LP

Assignee(s): (std): HOOD JAY J ; MALLE EDWARD M ; VEC IND INC ; VEC IND L L C

Assignee(s): WELLS FARGO BANK NATIONAL ASSOCIATION ; VEC IND LLC ; VEC INDUSTRIES INC ; WABASH NATIONAL LP ; WELLS FARGO CAPITAL FINANCE LLC AGENT AS ; VEC INDUSTRIES L L C ; VEC IND ; GENMAR HOLDINGS INC

Inventor(s): (std): HOOD JAY J ; MALLE EDWARD M

Agent(s): MERCHANT AND GOULD PC; MERCHANT AND GOULD PA; BRUESS STEVEN C

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: ELECTRICALLY CONDUCTIVE PATTERNS, ANTENNAS AND METHODS OF MANUFACTURE

Abstract: The invention teaches improved, novel methods and materials for the production of electrically conductive patterns, antennas and complex circuitry. The invention contemplates the use of directly electroplateable resins for production of these articles. The unique suitability of directly electroplateable resins to allow facile manufacture of the electrically conductive patterns desired using a broad range of processing and manufacturing approaches is demonstrated.

Classifications:

International (IPC 8-9): C25D5/56 G03C5/00 G03F7/00 H01P11/00 H01Q1/00 H01Q1/12 H01Q1/22 H01Q1/24 H01Q1/38 H01Q1/50 H01Q11/08 H01Q13/08 H01Q17/00 H01Q7/00 H05K1/18 H05K3/18 H05K3/24 (Advanced/Invention);

H05K3/24 (Advanced/Non-invention); G03C5/00 G03F7/00 H01Q1/12 H01Q1/22 H01Q1/24 H01Q1/38 H01Q17/00 H05K3/18 (Core/Invention); H05K3/24 (Core/Non-invention)

International (IPC 1-7): C25D5/02 G03C5/00 G03F1/14 H01Q1/00 H01Q1/38 H01Q1/40 H01Q13/08 H01Q7/00 H01Q9/04

CPC: G06K19/07749 G06K19/0775 H01Q7/00 H01Q23/00 Y10T29/49016 Y10T29/49018 Y10T29/49155 H01L2224/16225 H01Q1/2208 G06K19/07779 G06K19/07783 H05K1/182 H01Q9/27 H01Q1/2225

H01Q1/243 H01Q1/38 H05K3/188 H05K3/245

European: G06K19/077T G06K19/077T2 G06K19/077T7C1

G06K19/077T7C1C H01Q1/22 H01Q1/22C H01Q1/22C4 H01Q1/24A1A

H01Q1/38 H01Q23/00 H01Q7/00 H01Q9/27 H05K1/18C H05K3/18C

T05K3/24G

US: 29/600 29/600S 29/601 29/601P 29/846 29/846S 343/700

343/700.0MS 343/700MS 343/878 343/906 430/270.1 430/311 430/311P

430/311S

JP F-Term: 5J045 5J045/EA07 5J045/LA03 5J045/NA01 5J046

5J046/AB11 5J046/AB12 5J046/AB13 5J046/PA01 5J048 5J036

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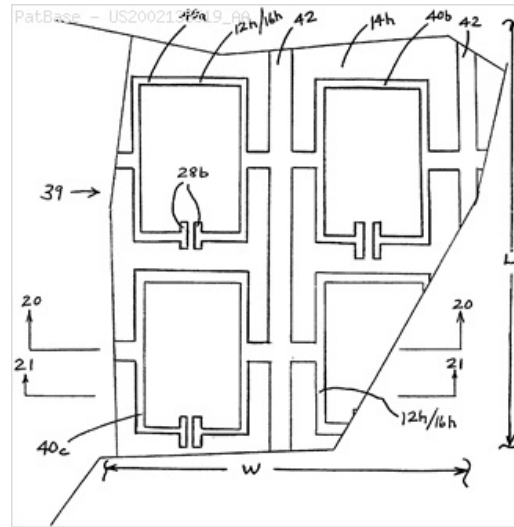
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JP F-Index: H01Q1/38 H01Q13/08 H01Q7/00 H01P11/00/N H01Q11/08

H01Q1/50 H05K3/18/A H05K3/32/Z



Family:

Publication number	Publication date	Application number	Application date
AU2002306897 AA	20021008	AU20020306897	20020325
CA2441965 AA	20030924	CA20022441965	20020325
CN1500296 A	20040526	CN20028007216	20020325
EP1388186 A1	20040211	EP20020753858	20020325
EP1388186 A4	20050817	EP20020753858	20020325
IN01186KN2003 A	20050930	IN2003KN01186	20030916
JP2004533151 T2	20041028	JP20020576050T	20020325
JP2007129759 A2	20070524	JP20060350173	20061226
JP2007282247 A2	20071025	JP20070103996	20070411
US2002135519 AA	20020926	US20010818128	20010326
US2004090380 AA	20040513	US20030472875	20030923
US2005123857 AA	20050609	US20040988044	20041112
US2006017623 AA	20060126	US20050223482	20050908
US2007169336 AA	20070726	US20070726795	20070323
US2007182641 AA	20070809	US20070726791	20070323
US2010156723 AA	20100624	US20070726783	20070323
US6582887 BB	20030624	US20010818128	20010326
US7394425 BB	20080701	US20050223482	20050908
US7452656 BB	20081118	US20040988044	20041112
US7564409 BB	20090721	US20070726791	20070323
WO02078122 A1	20021003	WO2002US09408	20020325

Priority:

US20010818128 20010326	US20020472875 20020325	WO2002US09408 20020325
US20030408532 20030407	US20030472875 20030923	US20040988044 20041112
US20050223482 20050908	US20070726783 20070323	US20070726795 20070323
US20070726791 20070323		

Probable Assignee: ERTEK INC

Assignee(s): (std): DANIEL LUCH ; ERTEK INC ; LUCH DANIEL

Assignee(s): ERTEK SOLUTION LLC ; ERTEK SOLUTIONS LLC

Inventor(s): (std): DANIEL LUCH ; LUCH DANIEL

Agent(s): SMART AND BIGGAR; DANIEL LUCH; DANIEL LUCH ERTEK INC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

24) Family number: 42011633 (US2008182054A)

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Title: MULTI-FUNCTION VACUUM BAG FOR COMPOSITE PART MANUFACTURE

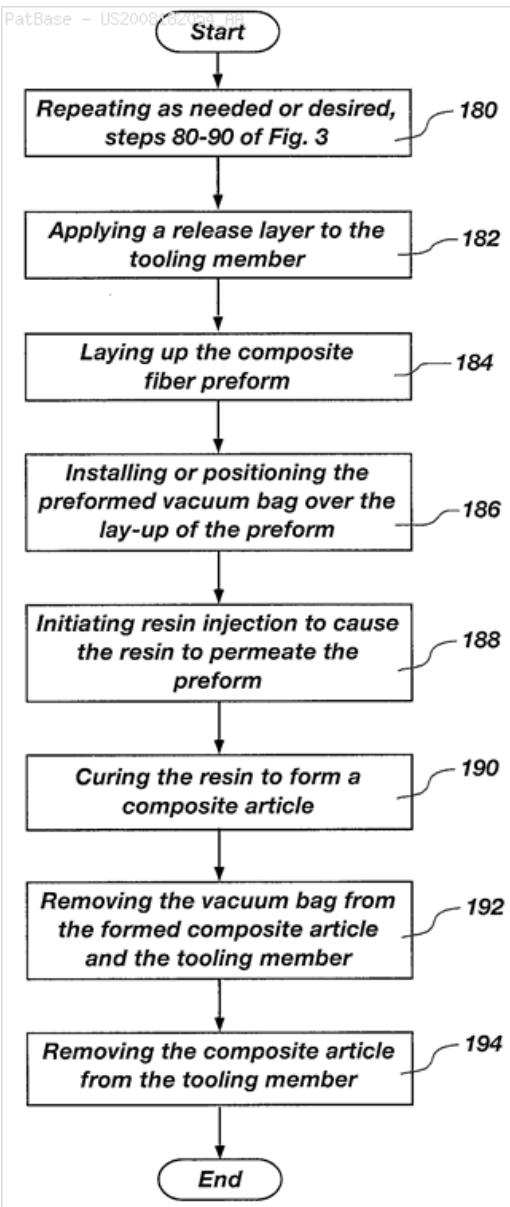
Abstract: A multi-function vacuum bag for use in the manufacture of composites, wherein the vacuum bag may be configured to provide all-in-one capabilities, namely to function as the vacuum bag, a caul or caul sheet, release layer and/or a breather, as well as to provide other functions. Specifically, the multi-function vacuum bag allows a separate breather or breather material, a separate caul or caul layer, and a release or release layer all to be eliminated, if desired, as the multi-function vacuum bag is capable of performing the functions of each of these once formed. Furthermore, the multi-function vacuum bag may be used with various composite manufacturing process, such as VARTM or resin infusion processes, various vacuum bagging processes, filament winding processes, and others.

Classifications:

International (IPC 8-9): B29C41/42 B29C65/70 B29C70/28 B29C70/44

B32B27/00 (Advanced/Invention);

B29C41/34 B29C65/70 B29C70/04 B32B27/00 (Core/Invention)



Family:

Publication number	Publication date	Application number	Application date
US2008182054 AA	20080731	US20080008400	20080109
WO08086022 A1	20080717	WO2008US00349	20080109

Priority:

US20070879725P 20070109 US20080008400 20080109

Probable Assignee: AMERICAN CONSULTING TECHNOLOGY AND RESEARCH INC

Assignee(s): (std): AMERICAN CONSULTING TECHNOLOGY ; MCCARVILL WILLIAM T ; RIDGES MICHAEL D

Assignee(s): AMERICAN CONSULTING TECHNOLOGY AND RESEARCH INC

Inventor(s): (std): RIDGES MICHAEL D ; MCCARVILL WILLIAM T

Agent(s): THORPE NORTH AND WESTERN LLP; HOBSON GARRON M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

25) Family number: 41978642 (US2008159694A)

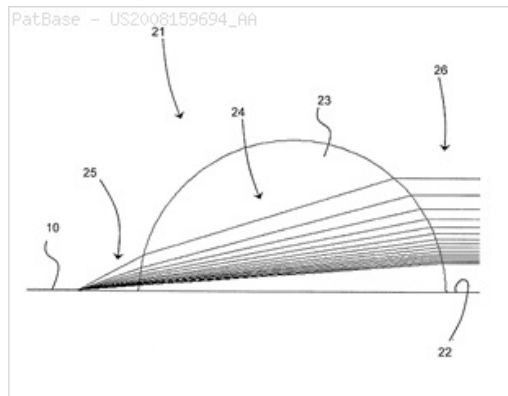
© PatBase

Title: LENS CONFIGURATIONS FOR OPTICAL TOUCH SYSTEMS

Abstract: An optical system (21) is disclosed, that includes a plurality of waveguides (10, 14) on a substrate (22) and a unitary collimating lens element (23) adjacent and optically coupled to the waveguides (10, 14) and on the same substrate (22). Methods for producing optical systems (21) and a plurality of optical signals are also disclosed. A collimating lens element (23) for the optical system (21) is also disclosed

Classifications:

International (IPC 8-9): B23P11/00 C03B37/00 G02B6/00 G02B6/32 G06F3/042 H04B10/12 (Advanced/Invention); B23P11/00 C03B37/00 G02B6/32 (Core/Invention)
CPC: G02B6/32 G06F3/0421 G02B6/4221 G02B6/423 Y10T29/49826
European: G02B6/32 G06F3/042B S02B6/42C5A2 S02B6/42C5P2
US: 29/428 29/428P 385/33 385/33P 65/387 65/387S

**Family:**

Publication number	Publication date	Application number	Application date
TW200844525 A	20081116	TW20070149924	20071225
US2008159694 AA	20080703	US20070965230	20071227
US2009056098 AA	20090305	US20080201126	20080829
WO08077195 A1	20080703	WO2007AU01999	20071224

Priority:

US20060882113P 20061227 US20070968794P 20070829 US20070969564P 20070831
US20070965230 20071227 US20080201126 20080829

Probable Assignee: RPO PTY LTD

Assignee(s): (std): PAYNE JONATHAN ; RPO PTY LTD

Assignee(s): RPO PTY LIMITED

Inventor(s): (std): PAYNE JONATHAN

Agent(s): MILLER MATTHIAS AND HULL; SHELSTON IP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

26) Family number: 11331656 (WO9918150A1)

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Title: IN MOLD BONDED THIN COMPOSITES AND A METHOD FOR MANUFACTURING THE COMPOSITES

Abstract: This invention relates to a decorative and/or architectural composite article fabricated from a resin matrix (22) bound to a substrate (24). The resin matrix (22) primarily contains a curable liquid resin, metal or stone particles, and a catalyst. The composite piece has the appearance of metal or stone and the utility of a piece of plywood, particle board, or other building panel. This invention also relates to a process for fabricating the composite pieces. In addition, this invention is directed to a thin, composite sheet or laminate-like product and methods for manufacturing the thin composite. This thin composite has the appearance of metal or stone, but can be used in construction like a piece of high-pressure decorative laminate or flexible paneling or the like.

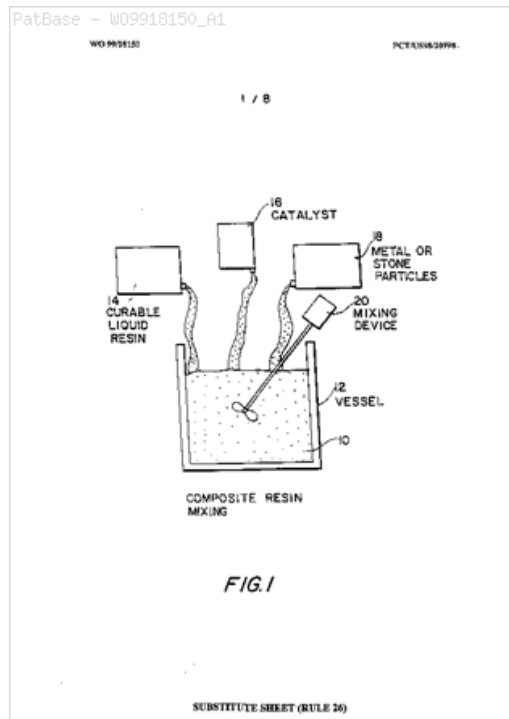
Classifications:

International (IPC 8-9): C08K3/00 (Advanced/Invention); C08K3/00 (Core/Invention)

International (IPC 1-7): B27N3/00 C08J9/32 C08K3/40

CPC: C08K3/01 C08K2201/013

European: C08K3/00P M08K201/013



Family:

Publication number	Publication date	Application number	Application date
AU199896851 A1	19990427	AU19980096851	19981007
WO9918150 A1	19990415	WO1998US20998	19981007

Priority:

US19970061539P 19971007 US19980169803 19981006 WO1998US20998 19981007

Probable Assignee: QUESTECH CORP

Assignee(s): (std): QUESTECH CORP

Inventor(s): (std): MERRIAM BRENT ; PELLETIER DAVID ; QUESTEL ROGER

Inventor(s): ROGER QUESTEL ; BRENT MERRIAM ; DAVID PELLETIER

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HR HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

27) Family number: 64367664 (EP3103627A1)

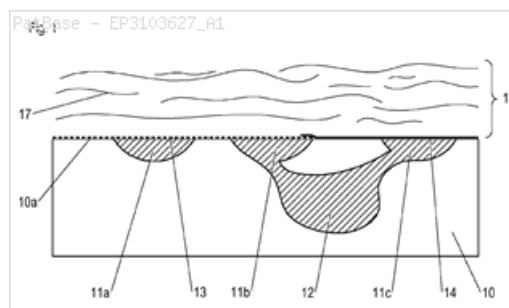
© PatBase

Title: SUCTION IN RESIN INFUSION METHOD ASPIRATION DANS UN PROCEDE D'INFUSION

Abstract: Source: EP3103627A1 [DE] Die Erfindung betrifft ein Verfahren zur Herstellung eines mehrschichtigen Bauteils mittels Infusionstechnik. Das Verfahren umfasst ein Schichten von Fasermaterial (17, 27, 37) und mindestens einem Kern (10, 20, 30), ein Absaugen eines Luftvolumens aus wenigstens einer Aushoehlung (11 a, 11 b, 11 c, 12) im mit dem Fasermaterial geschichteten Kern und ein Infiltrieren des Fasermaterials mit Matrixmaterial. Die Aushoehlung ist vom infiltrierten Fasermaterial durch ein luftdurchlaessiges und harzdichtes Trennmedium (13, 23, 33) getrennt. Die Erfindung betrifft weiterhin einen Kern (10, 20, 30) fuer ein mehrschichtiges Faserverbundbauteil, der wenigstens eine Aushoehlung (11 a, 11 b, 11 c, 12) aufweist, die durch ein luftdurchlaessiges, harzdichtes Trennmedium (13, 23, 33) abgedeckt ist. **Machine translation:** The invention relates to a process for manufacturing a multilayer component using the infusion technique. The procedure includes a layer of fibrous material (17, 27, 37) and at least a core (10, 20, 30), a suction of air volumes from at least an erosion (11 a, 11 b, 11 c, 12) essentially layered with the yarn and an infiltration of the fibres with a matrix material. The erosion is separated from the infiltrated fiber material by a vented and dense resin separation medium (13, 23, 33). The invention also relates to a core (10, 20, 30) for a multi-layer fiber composite component that has at least an erosion (11 a, 11 b, 11 c, 12), which is covered by a dense resin, vented separation medium (13, 23, 33).

Classifications:

International (IPC 8-9): B29C33/76 B29C70/08 B29C70/44 B29C70/48 B29C70/54 B29C70/86 B32B37/10 (Advanced/Invention)
CPC: B29C70/547 B29C70/086 B29C70/443 B29C70/48 B29C70/865 B29K2715/003



Family:

Publication number	Publication date	Application number	Application date
DE102015007285 A1	20161215	DE201510007285	20150610
EP3103627 A1	20161214	EP20160169617	20160513

Priority:

DE201510007285 20150610

Probable Assignee: AIRBUS DEFENCE AND SPACE GMBH

Assignee(s): (std): AIRBUS DEFENCE AND SPACE GMBH

Inventor(s): (std): GAJEWSKI BENJAMIN

Agent(s): ISARPATENT

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

28) Family number: 34325699 (US2007063378A)

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Title: COMPOUND TOOLING SYSTEM FOR MOLDING APPLICATIONS

Abstract: A compound mold or tooling system is designed to provide an alternative to conventional, expensive, metal molds for various plastics molding applications. The compound mold comprises a replaceable thin-walled liner, or skin-mold, defining the mold surface, temporarily bonded by vacuum means or mechanical means to a conforming backing-mold mold body supported by a rigid backing-plate. Both skin- and backing-molds are composed of suitable polymers with or without additives, fillers, reinforcements or other inclusions depending on mold requirements. The backing-plate contains standard features and fixtures common to all molds used in the particular process or of a particular geometry.

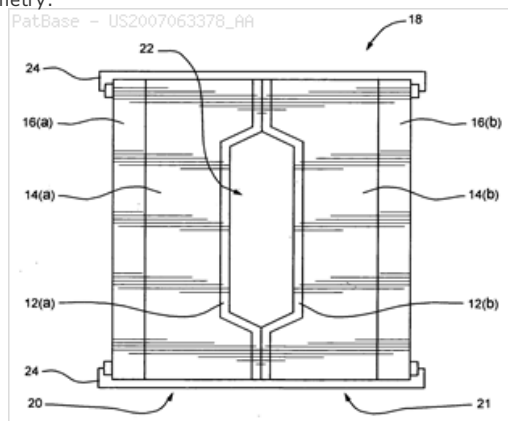
Classifications:

International (IPC 8-9): B29C33/40 B29C39/00 (Advanced/Invention); B29C33/40 (Core/Invention)

CPC: B33Y80/00 B29C33/40 B29C33/565

European: B29C33/40 B29C33/56B

US: 264/219 264/219P 425/388 425/388S 425/403 425/405.1 425/406 425/406S 425/470



Family:

Publication number	Publication date	Application number	Application date
US2007063378 AA	20070322	US20060521716	20060915
US7972129 BB	20110705	US20060521716	20060915

Priority:

US20050717362P 20050916

US20060521716 20060915

Probable Assignee: O DONOGHUE JOSEPH

Assignee(s): (std): O DONOGHUE JOSEPH

Inventor(s): (std): O DONOGHUE JOSEPH

Inventor(s): O'DONOGHUE JOSEPH

Agent(s): PHILIP KOENIG; PHILIP

29) Family number: 52667702 (US2014162032A)

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Title: STRUCTURE INTEGRATED BY VACUUM-PRESSURE FORMING OR VACUUM FORMING, AND MANUFACTURING METHOD THEREOF

Abstract: A structure comprising a decorative sheet having a surface layer and an adhesive layer containing a polymer having 25 to 100 mass percent of propylene units, and a substrate containing a polymer having 25 to 100 mass percent of propylene units. The decorative sheet and the substrate are integrated by vacuum-pressure forming or vacuum forming.

Classifications:

International (IPC 8-9): B29C51/00 B29C51/10 B29C51/12 B29C51/14 B29K23/00 B29L31/00 B32B27/20 B32B27/32

B32B7/12 (Advanced/Invention);

B29C51/00 B29C51/10 B29K23/00 B29L31/00 (Advanced/Non-invention)

CPC: B32B7/12 B29C51/10 B29C51/14 B29C51/002 B29C2791/006

B29C2791/007 B29K2023/12 B29K2023/14 B29L2031/722

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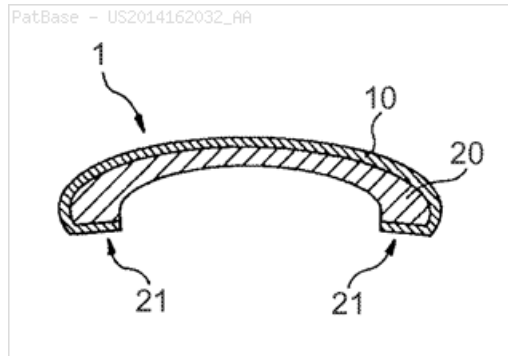
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US: 156/242 428/195.1

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4F208/AH46 4F208/AK08 4F208/MA01 4F208/MA03 4F208/MB01
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4F208/MK08 4F208/MK15 4F208/MW21 4F100/AB10 4F100/AK42
4F100/AK45 4F100/AL01 4F100/AR00 4F100/AT00 4F100/BA04
4F100/BA07 4F100/BA10 4F100/CA03 4F100/CA05 4F100/CA07
4F100/EH20 4F100/EJ21 4F100/EJ24 4F100/JK08 4F100/YY00 4F208/AA09
4F208/AH51
JP F-Index: B29C51/10 B29C51/14 B29L9/00 B32B27/32/E B29C51/12
B32B27/20/A



Family:

Publication number	Publication date	Application number	Application date
CA2840390 AA	20131223	CA20122840390	20120627
CN103702820 A	20140402	CN201280030970	20120627
CN103702820 B	20170412	CN201280030970	20120627
EP2726268 A2	20140507	EP20120737942	20120627
IN10213CN2013 A	20160624	IN2013CN10213	20131223
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JP2016147505 A2	20160818	JP20160105388	20160526
JP6005911 B2	20161012	JP20110146650	20110630
KR20140045996 A	20140417	KR20147002254	20120627
US2014162032 AA	20140612	US20120118912	20120627
US10252491 BB	20190409	US20120118912	20120627
WO13003428 A2	20130103	WO2012US44347	20120627
WO13003428 A3	20130425	WO2012US44347	20120627

Priority:

JP20110146650 20110630 WO2012US44347 20120627 US20120118912 20120627
JP20160105388 20160526

Probable Assignee: 3M CO

Assignee(s): (std): 3M INNOVATIVE PROPERTIES CO ; ARAKI TOMOTAKA ; TAKAMATSU YORINOBU ; MIYAZAWA HARUHIKO ; EGASHIRA KEN ; THREE M INNOVATIVE PROPERTIES

Assignee(s): THREE M INNOVATIVE PROPERTIES CO ; 3M INNOVATIVE PROPERTIES COMPANY ; 3M CO ; 3M INNOVATIVE PROPERTIES CO

Inventor(s): (std): TAKAMATSU YORINOBU ; MIYAZAWA HARUHIKO ; EGASHIRA KEN ; ARAKI TOMOTAKA

Agent(s): SMART AND BIGGAR; HERZOG FIESSER AND PARTNER; AOKI ATSUSHI; KOGA TETSUJI; ISHIDA TAKASHI; SOO PHILIP P; KNECHT HAROLD C III ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

30) Family number: 34404713 (US2008261014A)

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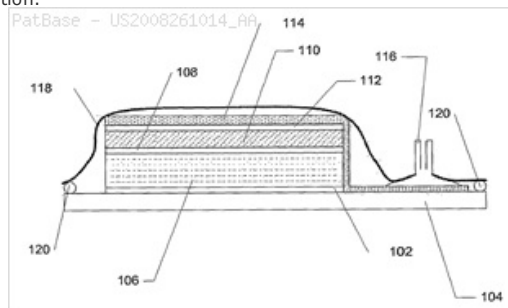
Title: COMPOSITE ARTICLES COMPRISING PROTECTIVE SHEETS AND RELATED METHODS

Abstract: Methods of the invention include those for applying protective sheets to composite articles. According to these methods and resulting composite articles, a protective sheet is applied to at least a portion of an exterior surface formed from a composite material and where protection is desired. At least one exterior surface of the composite article to be protected can be integrally formed in the presence of the protective sheet. Improved bonding of the protective sheet to the composite article and improved processing efficiency are advantageously achieved according to the invention.

Classifications:

International (ipc 8-9): B29C37/00 B29C39/12 B29C43/12 B29C43/36 B29C45/14 B29C51/16 B29C51/28 B29C69/00 B29C70/08 B29C70/44 B29C70/78 B29K105/08 B29K105/24 B29L31/52 B29L9/00 B32B27/00 B32B27/02 B32B27/06 B32B27/08 B32B27/18 B32B27/30 B32B27/32 B32B27/38 B32B27/40 B32B3/08 B32B33/00 B32B37/00 (Advanced/Invention); B29C43/36 B29K105/08 B29K105/24 B29L31/52 B29L9/00 (Advanced/Non-invention); B29C39/12 B29C45/14 B29C51/00 B29C69/00 B29C70/00 B32B27/00 B32B27/02 B32B27/06 B32B27/40 B32B3/08 B32B33/00 B32B37/00 (Core/Invention)

CPC: B32B27/06 B29C45/1671 B32B1/00 B32B27/20 B32B27/22 B32B27/283 B32B27/308 B32B27/32 B32B27/36 B32B2307/412 B32B2307/50 B32B2307/51 B32B2307/54 B32B2307/546 B32B2307/554 B32B2307/558 B32B2307/584 B32B2605/00 B32B27/08 B29C37/0025 B29C43/12 B29C51/28 B29C70/086 B29C70/44 B29C2043/3644 B29C2791/006 B29K2105/0854 B29K2105/243 B29L2009/001 B29L2031/52 B32B27/18 B32B27/304 B32B27/322 B32B27/38 B32B27/40 B32B2307/4023 B32B2307/714 B32B2307/752 B32B2509/00 B32B2603/00 B32B2605/18 Y10T156/10 Y10T428/239 Y10T428/24364 Y10T428/249939 Y10T428/26 Y10T428/31507 Y10T428/31551
European: B29C37/00C B29C43/12 B29C51/28 B29C70/08C B29C70/44 B32B25/04 B32B27/08 B32B27/18 B32B27/30B B32B27/32A B32B27/38 B32B27/40 L29C43/36D1 L29C45/16J L29C791/00E4 L29K105/08C L29K105/24B L29L31/52 L29L9/00B L32B307/402B L32B307/714 L32B307/752 L32B509/00 L32B603/00 L32B605/18



US: 156/60 156/60S 264/257 264/257S 264/279 264/279S 428/142 428/220 428/297.1 428/297.100P 428/332 428/412 428/412P 428/423.1 428/76 428/76P

Family:

Publication number	Publication date	Application number	Application date
EP1937454 A2	20080702	EP20060839510	20061023
EP1937454 A4	20081210	EP20060839510	20061023
EP1937454 B1	20160525	EP20060839510	20061023
EP1937475 A2	20080702	EP20060839506	20061023
EP1937475 A4	20090325	EP20060839506	20061023
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EP2076388 A2	20090708	EP20070868248	20070425
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EP2404729 A1	20120111	EP20110006959	20061023
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US2008261014 AA	20081023	US20060089395	20061023
US2008286576 AA	20081120	US20060090574	20061023
US2010068446 AA	20100318	US20070375157	20070425
US8545959 BB	20131001	US20060089395	20061023
US8545960 BB	20131001	US20070375157	20070425
US10265932 BB	20190423	US20060090574	20061023
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WO07048141 A3	20071101	WO2006US60160	20061023
WO07048145 A2	20070426	WO2006US60171	20061023
WO07048145 A3	20071227	WO2006US60171	20061023
WO08051629 A2	20080502	WO2007US67377	20070425
WO08051629 A3	20080925	WO2007US67377	20070425

Priority:

US20050728987P	20051021	EP20060839506	20061023	WO2006US60160	20061023
WO2006US60171	20061023	US20060089395	20061023	US20060090574	20061023
EP20070868248	20070425	WO2007US67377	20070425	US20070375157	20070425

Probable Assignee: ENTROTECH INC

Assignee(s): (std): ENTROTECH COMPOSITES LLC ; ENTROTECH INC ; MCGUIRE JAMES E ; MCGUIRE JAMES E JR ; MCGUIRE JR JAMES E ; STRANGE ANDREW C

Inventor(s): (std): MCGUIRE JAMES E ; MCGUIRE JAMES E JR ; MCGUIRE JR JAMES E ; STRANGE ANDREW C ; STRANGE ANDREW ; MCGUIRE JAMES

Inventor(s): MCGUIRE JR

Agent(s): LAUFHUETTE DIETER ET AL; LAUFHUETTE DIETER; GRIFFITH LAW FIRM A PC; LISA M; GRIFFITH LISA M

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

31) Family number: 56884745 (US2016002390A)

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Title: EPOXY RESIN COMPOSITION, PREPREG, FIBER REINFORCED PLASTIC MATERIAL, AND MANUFACTURING METHOD FOR FIBER REINFORCED PLASTIC MATERIAL

Abstract: An embodiment relates to a resin composition containing a tetraglycidyl amine; a bisphenol epoxy; a dicyandiamide; and an aromatic urea; wherein the tetraglycidyl amine has a EEW of 110 g/eq to 140 g/eq and is an amount of 30 to 60 PHR per 100 PHR of total epoxy resin in the resin composition; wherein the resin composition has a Tg of at least 160 degrees centigrade when cured at 143 degrees centigrade for 3 min and also maintains a Tg of greater than 160 degrees centigrade when cured at 177C for 1 min or longer.

Classifications:

International (IPC 8-9): B32B27/04 B32B27/26 B32B27/38 C08G59/14 C08G59/32 C08G59/38 C08G59/40 C08G59/44 C08G59/46 C08G59/50 C08G59/60 C08G59/68 C08J5/04 C08J5/24 C08L63/00 C08L63/02 (Advanced/Invention)

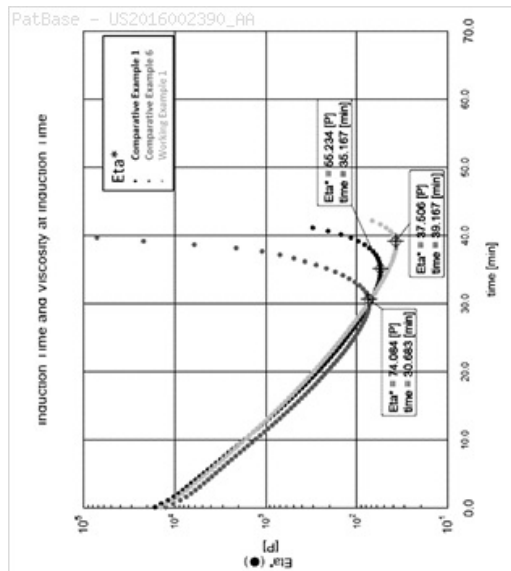
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US: 523/400 523/427 525/526

JP F-Term: 4F072 4F072/AA07 4F072/AB10 4F072/AD28 4F072/AE01 4F072/AG03 4F072/AH21 4F072/AK05 4F072/AK14 4F072/AL02 4F072/AL04 4F072/AL11 4J036 4J036/AD08 4J036/AH07 4J036/AH18 4J036/AJ17 4J036/DC25 4J036/DC31 4J036/JA11

JP F-Index: C08G59/46 C08G59/60 C08J5/24/CFC

JP Facet: CFC



Family:

Publication number	Publication date	Application number	Application date
CN104918987 A	20150916	CN201480004156	20140107
CN104918987 B	20181106	CN201480004156	20140107
EP2941452 A1	20151111	EP20140735153	20140107
EP2941452 A4	20160810	EP20140735153	20140107
EP2941452 B1	20181226	EP20140735153	20140107
JP2016504472 T2	20160212	JP20150551834T	20140107
JP6394610 B2	20180926	JP20150551834T	20140107
KR20150104120 A	20150914	KR20157020162	20140107
TW201430007 A	20140801	TW20140100348	20140106
TWI621639 B	20180421	TW20140100348	20140106
US2016002390 AA	20160107	US20140759621	20140107
US9982086 BB	20180529	US20140759621	20140107
WO14107725 A1	20140710	WO2014US10497	20140107
WO14107725 A9	20140918	WO2014US10497	20140107

Priority:

US20130749703P 20130107 US20130911386P 20131203 WO2014US10497 20140107
US20140759621 20140107

Probable Assignee: TORAY COMPOSITES AMERICA INC

Assignee(s): (std): AIR TONY CO LTD ; HUGHES JOHNATHAN C ; SAKATA HIROAKI ; TORAY IND INC ; TORAY IND ; TORAY INDUSTRIES

Assignee(s): TORAY COMPOSITES AMERICA INC

Inventor(s): (std): SAKATA HIROAKI ; HUGHES JOHNATHAN C ; HUGHES JONATHAN C

Agent(s): WEBSTER JEREMY MARK; PILLSBURY WINTHROP SHAW PITTMAN LLP; DAVE RAJ S ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

32) Family number: 28168778 (US2002018281A)

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Title: COUPLED ELECTROCHROMIC COMPOUNDS WITH PHOTOSTABLE DICATION OXIDATION STATES

Abstract: Coupling of anodic electrochromic compounds by a covalent bond or a bridge link which provides for electronic communication between the coupled electrochromic compounds results in coupled electrochromic compounds which exhibit greater stability as well as electrochromic activity that differs from the monomeric electrochromic compounds. Extension of the absorption spectrum into the near-infrared region of the spectrum is frequently observed. The coupled electrochromic compounds are highly suitable for use in electrochromic media used to produce electrochromic devices.

Classifications:

International (IPC 8-9): B05D5/06 B05D5/12 B23K26/362 B23K26/402 B32B17/06 B32B17/10 B32B7/02 B32B7/14 B60Q1/26 B60R1/02 B60R1/04 B60R1/06 B60R1/07 B60R1/08 B60R1/12 C03C17/36 C09K9/02 C23C14/08 C23C14/18 C23C14/34 C23C14/46 C23C14/58 F16M13/02 G02B1/04 G02B1/10 G02B13/04 G02B27/00 G02B27/14 G02B5/08 G02B5/20 G02B5/26 G02B5/28 G02B7/182 G02F1/00 G02F1/01 G02F1/03 G02F1/061 G02F1/15 G02F1/153 G02F1/155 G02F1/157 G02F1/161 G02F1/163 H05K1/02 H05K3/32 (Advanced/Invention); B60R1/04 B60R1/06 B60R1/08 C23C14/08 C23C14/34 G02F1/1345 G02F1/15 G02F1/155 G02F1/157 G02F1/161 H05K1/03 (Advanced/Non-invention);

B05D5/06 B32B7/02 B60R1/06 B60R1/08 B60R1/12 C09K9/02
C23C14/46 G02B1/04 G02B27/00 G02B5/08 G02B5/20 G02B5/26
G02B5/28 G02F1/00 G02F1/01 H05K1/02 H05K3/32 (Core/Invention);
H05K1/03 (Core/Non-invention);
B60R (Subclass/Invention)

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G02F1/161

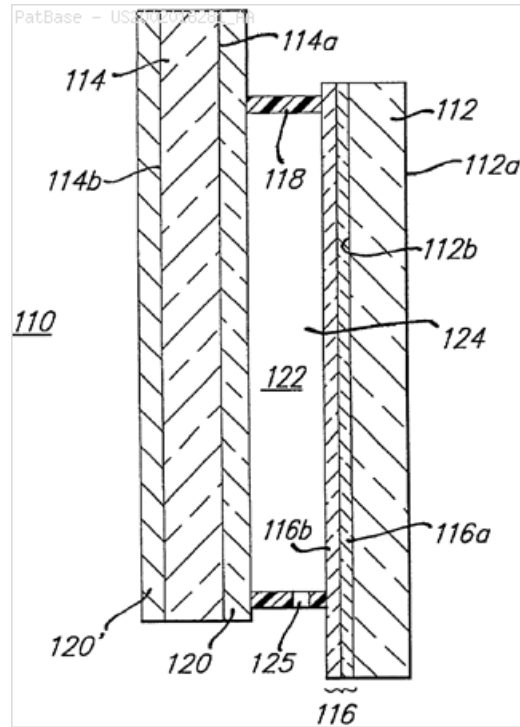
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359/267P 359/268 359/269 359/270 359/271 359/272 359/273 359/273P 359/273S 359/274 359/275 359/296 359/601 359/602
359/603 359/603S 359/604 359/604P 359/636 359/636S 359/753 359/838 359/838S 359/839 359/871 359/871S
359/872 359/872S 359/877 359/883 359/883S 359/900 362/494 362/514 362/516 427/162 427/555 428/141 428/141P 428/213
428/213S

JP F-Term: 2K001 2K001/AA08 2K001/AA10 2K001/BA10 2K001/BA17 2K001/BB29 2K001/BB48 2K001/BB50 2K001/CA04
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Family:

Publication number	Publication date	Application number	Application date
AU2003272785 AA	20040423	AU20030272785	20030929
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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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Title: PLASTIC MATERIAL WITH DECORATIVE ATTRIBUTES

Abstract: An additive system for use in a polymeric formulation that includes a plurality of visually differentiable granules, the visually differentiable granules composed of a pigmented material and having a defined size distribution. The visually differentiable granules are composed of at least first and second color groups, each having a pigment shade differing from one another. The visually differentiable granules have an average aspect ratio of at least 2. The visually differentiable granules can be utilized in various polymeric formulations to make useful articles having a pleasing aesthetic appearance.

Classifications:

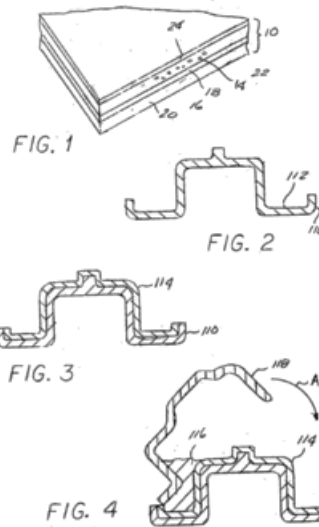
International (ipc 8-9): B05D1/12 B05D7/00 B29C39/12 B29C41/22 B29C47/00 B29C47/04 B29C69/00 B32B27/20 B44C3/02 B44C3/04 B44F1/08 (Advanced/Invention); B29C41/08 B29C43/00 (Advanced/Non-invention); B05D1/12 B05D7/00 B29C39/12 B29C41/22 B29C47/00 B29C47/04 B29C69/00 B32B27/20 B44C3/00 B44F1/00 (Core/Invention); B29C41/08 B29C43/00 (Core/Non-invention)

International (ipc 1-7): B32B1/00 B32B5/16

CPC: B44F1/08 B29C41/08 B29C41/22 B29C43/003 B29K2995/002 B29K2995/0029 B44C3/025 B44C3/04 Y10T428/25 Y10T428/254 Y10T428/24802 Y10T428/31692 B32B27/08 B32B27/20 B32B2307/51 B32B2398/10 B32B2398/20 B32B2451/00 B29C48/307 B29C48/0011 B29C48/0017 B29C48/0018 B29C48/0022 B29C48/08 B29C48/154 B29C48/17 B29C48/175 B29C48/21 B29C48/30

European: B29C41/22 B29C47/00J4 B29C47/00J5 B29C47/06P B29C47/14B B32B27/20 B44C3/02B B44C3/04 B44F1/08 L29C41/08 L29C43/00B L29C47/00J5 L29C47/00L7 L29C47/00L8 L29C47/04A2 L29K995/00E2 L29K995/00E7

US: 264/211.12 264/211.120P 264/245 264/245S 264/299 264/299S 264/73 264/73P 264/75 264/75S 427/180 427/180S 427/421.1 427/421.100S 428/195.1 428/195.100P 428/323 428/323P 428/327 428/327P 428/461 428/461S

**Family:**

Publication number	Publication date	Application number	Application date
US2004126571 AA	20040701	US20030737512	20031216
US2005147799 AA	20050707	US20040011634	20041214
US2007090553 AA	20070426	US20060562172	20061121
US2007166532 AA	20070719	US20070683567	20070308
US2008067713 AA	20080320	US20070856853	20070918

Priority:

US20020434334P 20021217	US20030737512 20031216	US20040011634 20041214
US20060562172 20061121	US20070683567 20070308	US20070856853 20070918

Probable Assignee: BORDENER ENGINEERED LAMINATES INC**Assignee(s):** (std): BORDENER ROBERT**Assignee(s):** BORDENER ROBERT B ; BORDENER ENGINEERED LAMINATES INC**Inventor(s):** (std): BORDENER ROBERT**Agent(s):** DOUGLAS J MCEVOY GIFFORD KRASS GROH SPRINKLE; GIFFORD KRASS SPRINKLE ANDERSON AND CITKOWSKI PC**34) Family number: 42456886** (US2010119836A)

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Title: STAINLESS STEEL COMPOSITE AND MANUFACTURING METHOD THEREOF

Abstract: A CFRP-integrated stainless steel complex used for a hydrogen containing tank, a food processing machine, a medical device, a general-purpose machine, and other machines can be designed as a further rational design product with a smaller weight. It has been found that a stainless steel material (22) having particular ultra-micro convex/concave shapes exhibits an excellent adhesive force in combination with an epoxy resin adhesive agent. By using the technique, a stainless steel thick plate piece (22) is used as a cover material in combination with a CFRP (21) to obtain a stainless steel complex (20). This can be assembled with other metal member by tightening bolts. Moreover, by using the excellent adhesive force, it is possible to easily create a structure member having a main portion of CFRP (21) and an end portion of metal. This can be easily assembled with and disassembled from other part by using bolts/nuts and screws.

Classifications:

International (IPC 8-9): B23P17/00 B32B15/08 B32B15/092 B32B15/18 B32B9/00 C09J11/04 C09J11/08 C09J163/00 C09J5/02 C23F1/28 (Advanced/Invention);

B23P17/00 B32B15/08 B32B9/00 C09J11/00 C09J11/02 C09J163/00 C09J5/02 C23F1/10 (Core/Invention)

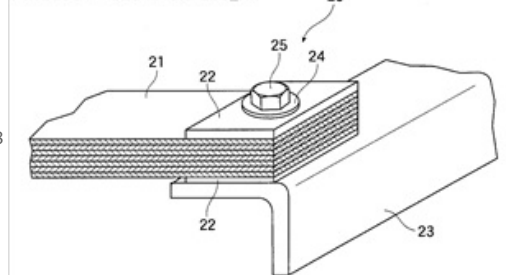
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European: B32B15/08 C08G59/40B2A C09J163/00 C23F1/28

US: 29/527.4 29/527.400S 428/416 428/416P

JP F-Term: 3C082 4F100 4F100/AA17/A 4F100/AB04/A 4F100/AB04/C 4F100/AK01/B 4F100/AK03/B 4F100/AK53/B 4F100/AL09/B 4F100/AN00/B 4F100/AT00/C 4F100/BA03 4F100/BA06 4F100/BA07 4F100/BA10/A 4F100/BA10/C 4F100/CA23/B 4F100/DD07/A 4F100/DE01/H 4F100/DG01/H 4F100/DG03/C 4F100/DG04/C 4F100/DG11/C 4F100/DH02/C 4F100/EJ08/3 4F100/EJ15/1 4F100/EJ15/A 4F100/GB31 4F100/GB48 4F100/JB12/B 4F100/JB16/B 4F100/JL11 4K057 4K057/WA05 4K057/WB02 4K057/WE03 4K057/WN06

JP F-Index: B32B15/08/N B32B15/08/S B32B15/092 B32B15/18 B32B9/00/A B82Y30/00 B82Y40/00 B82Y99/00 C23F1/28

**Family:**

Publication number	Publication date	Application number	Application date
EP2141014 A1	20100106	EP20080752021	20080424
EP2141014 A4	20100714	EP20080752021	20080424
JP2008133296 A1	20100729	JP20090511899T	20080424
JP5094849 B1	20121212	JP20090511899T	20080424
JP5094849 B2	20121212	JP20090511899T	20080424
US2010119836 AA	20100513	US20080597319	20080424
WO08133296 A1	20081106	WO2008JP57922	20080424

Priority:

JP20070114576 20070424 JP20090511899 20080424 WO2008JP57922 20080424

Probable Assignee: TAISEI PLAS CO LTD

Assignee(s): (std): ANDO NAOKI ; NARITOMI MASANORI ; TAISEI PLAS CO LTD

Assignee(s): TAISEI PLAS CO

Inventor(s): (std): NARITOMI MASANORI ; ANDO NAOKI ; ANDOH NAOKI

Agent(s): TER MEER STEINMEISTER AND PARTNER GBR; WESTERMAN HATTORI DANIELS AND ADRIAN LLP; TOMISAKI MOTONARI ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

35) Family number: 23546933 (US6177032B)

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Title: Polarized ophthalmic lenses and methods for making same

Abstract: A laminated light-polarizing composite lens is efficiently produced by bonding a pre-formed polarized sheet to the front convex surface of a molded polycarbonate lens in an autoclave. Excellent optical properties are obtained by the replication from a polished glass surface to the front surface of the lens. The outer surface layer of the finished lens is isotropic and thus does not produce unwanted birefringence effects. The method is especially well suited for the production of optically corrected decentered polycarbonate lenses. The process is simple and easily changed to produce lenses with different base curves and colors.

Classifications:

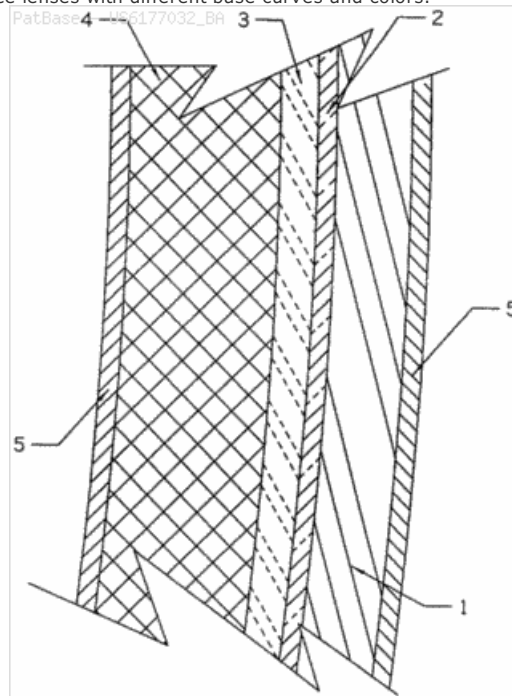
International (IPC 8-9): B29D11/00 (Advanced/Invention); B29D11/00 (Core/Invention)

International (IPC 1-7): B29D11/00

CPC: B29D11/0073

European: B29D11/00H

US: 264/1.32 264/1.34 264/1.7 264/132 264/134 264/17 264/2.7 264/27



Family:

Publication number	Publication date	Application number	Application date
AU2001229703 AA	20020806	AU20010229703	20010122
US6177032 BA	20010123	US19990390588	19990903
WO02058921 A1	20020801	WO2001US02106	20010122

Priority:

US19980099449P 19980908 US19990390588 19990903 WO2001US02106 20010122

Probable Assignee: ALCAT INC

Assignee(s): (std): ALCAT INC ; NAULT GERARD ; SMITH MICHAEL BARRY

Inventor(s): (std): NAULT GERARD ; SMITH MICHAEL BARRY

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ

36) Family number: 72978944 (WO19016142A1)

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Title: METHOD FOR ASSEMBLING PARTS, IN PARTICULAR COMPOSITE PARTS WITH FIBROUS REINFORCEMENTS, BY GLUING

Abstract: The invention concerns a method for assembling two parts (10, 20, 50, 60, 70, 80), referred to as first and second parts, the first part being produced from composite material with fibrous reinforcement embedded in a thermosetting or thermoplastic matrix, the method comprising the steps of: - obtaining the first part (10, 20, 80) comprising, on all or part of an outer surface, a first amorphous thermoplastic film (13, 23, 83), - positioning the first part and the second part such that the first amorphous thermoplastic film (13, 23, 83) is placed opposite the second part, - introducing a thermosetting resin between the first amorphous thermoplastic film (13, 23, 83) and the second part, - at least partially polymerising said thermosetting resin. When the two parts comprise an amorphous thermoplastic film, the parts are positioned such that the respective amorphous thermoplastic films are placed opposite each other, and the thermosetting resin is introduced between said amorphous thermoplastic films.

Classifications:

International (IPC 8-9): B29C65/48 B32B27/00 B32B37/12 B32B5/28 C09J5/04 C09J5/06 (Advanced/Invention)

CPC: C09J5/04 B29C65/4835 B32B27/00 C09J5/06

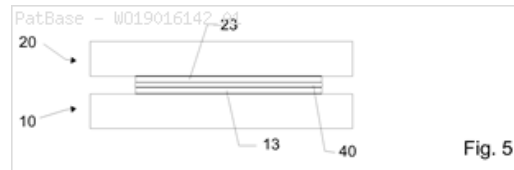


Fig. 5

Family:

Publication number	Publication date	Application number	Application date
FR3069250 A1	20190125	FR20170056850	20170719
WO19016142 A1	20190124	WO2018EP69278	20180716

Priority:

FR20170056850 20170719

Probable Assignee: AIRBUS SAS**Assignee(s):** (std): AIRBUS SAS ; ARIANEGROUP S A S ; ARIANEGROUP SAS**Inventor(s):** (std): BERMUDEZ MICHEL ; CAVALIERE FREDERICK ; LEFEBURE PATRICE ; THOMAS BRUNO**Inventor(s):** MICHEL BERMUDEZ ; PATRICE LEFEBURE ; FREDERICK CAVALIERE ; BRUNO THOMAS**Agent(s):** IPSIDE; GICQUEL OLIVIER

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

37) Family number: 23461964 (US6413630B)

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Title: DECORATIVE FILM

Abstract: A decorative film having an excellent decorative effect, excellent three-dimensional curvature emulating properties, three-dimensional curvature formability, long-term weather resistance and stain resistance. The decorative film comprises one or more transparent layers and a decorative metal layer. The transparent layer has an adhered side for being adhered to a substrate. The transparent layer comprises a copolymer of a tetrafluoroethylene, a hexafluoropropylene and a vinylidene fluoride. The decorative metal layer is on the adhered side of the transparent layer. A substrate can be bonded to the metal layer of the decorative film. The substrate can be a complex three-dimensional shaped substrate. The substrate can also be an injection molded substrate. An adhesive can be disposed on the metal layer of the decorative film, and the adhesive layer can be disposed between the metal layer and the substrate.

Classifications:

International (IPC 8-9): B29C45/14 B32B15/082 B32B27/06 B44C1/10 B44C1/14 C08J7/04 C08L27/16 (Advanced/Invention); B29C45/14 B32B15/08 B44C1/00 C08L27/00 (Core/Invention)

International (IPC 1-7): A47J37/08 B29C39/00 B29C45/14 B32B15/08 B32B27/00 B44C1/14 C08J7/04 C08L27/16

CPC: B29K2995/002 B44C1/105 B29C45/14811 B29C2045/14918 B29K2715/006 B29K2995/0026 B29L2009/008 B44C1/10 B44C1/14 Y10T428/2804 Y10T428/31504 Y10T428/3154

European: B29C45/14Q4 B44C1/10 B44C1/10B B44C1/14 L29C45/14Z3C L29K705/00 L29K715/00E L29K995/00E2 L29K995/00E6 L29L9/00D4

US: 219/386 219/495 219/518 219/519 264/131 264/135 264/298 264/299 264/300 264/319 264/328.1 264/331.11 264/331.14 264/478 427/248.1 427/490 427/497 427/498 428/344 428/411.1 428/421 428/432 99/339P

JP F-Term: 4F006 4F006/AA18 4F006/AB73 4F006/BA03 4F006/BA11 4F006/CA04 4F006/DA01 4F100 4F100/AB01/B 4F100/AK17/A 4F100/AK17/J 4F100/AK18/A 4F100/AK18/J 4F100/AK19/A 4F100/AK19/J 4F100/AL01/A 4F100/AR00/C 4F100/BA03 4F100/BA07 4F100/BA10/A 4F100/BA10/C 4F100/CB00 4F100/EH66/B 4F100/GB71 4F100/HB00/B 4F100/JL01 4F100/JL06 4F100/JL09 4F100/JL11/C 4F100/JN01/A 4F100/JN24 4F100/YY00/A 4F100/YY00/J 4J002 4J002/BD14/1 4J002/BD15/1 4J002/BD16/1 4J002/GF00

JP F-Index: B32B15/08/102/B B32B15/082/B C08J7/04 C08L27/16

Family:

Publication number	Publication date	Application number	Application date
AU199873859 A1	19981208	AU19980073859	19980514
CA2287908 AA	19991027	CA19982287908	19980514
CA2287908 C	20070410	CA19982287908	19980514
DE69804784 D1	20020516	DE19986004784	19980514
DE69804784 D1	20020516	DE19986004784T	19980514

DE69804784 T2	20021128	DE19986004784T	19980514
EP0981452 A1	20000301	EP19980921190	19980514
EP0981452 B1	20020410	EP19980921190	19980514
JP10315388 A2	19981202	JP19970125742	19970515
JP3779422 B1	20060531	JP19970125742	19970515
JP3779422 B2	20060531	JP19970125742	19970515
US6413630 BA	20020702	US19990423260	19991104
WO9851516 A1	19981119	WO1998US09815	19980514

Priority:

JP19970125742 19970515 WO1998US09815 19980514 US19990423260 19991104

Probable Assignee: 3M CO

Assignee(s): (std): 3M CO ; 3M INNOVATIVE PROPERTIES CO ; MINNESOTA MINING AND MANUFACTURING COMPANY ; MINNESOTA MINING AND MFG ; NAKAYAMA AKIHIKO

Assignee(s): MINNESOTA MINING AND MFG CO ; MINNESOTA MINING AND MFG CO It 3M gt ; MINNESOTA MINING AND MANUFACTURING CO ST PAUL ; 3M INNOVATIVE PROPERTIES COMPANY ; MINNESOTA MINING AND MANUFACTURING CO

Inventor(s): (std): AKIHIKO NAKAYAMA ; NAKAYAMA AKIHIKO

Agent(s): SMART AND BIGGAR

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

38) Family number: 63122966 (US2017323805A)

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Title: FILM, METHOD FOR ITS PRODUCTION, AND METHOD FOR PRODUCING SEMICONDUCTOR ELEMENT USING THE FILM

Abstract: To provide a film which is excellent in releasing property with respect to a resin sealed portion and excellent in low migration property and peeling property with respect to a semiconductor chip, a source electrode or a sealing glass and which is suitable as a mold release film for producing a semiconductor element having a part of the surface of a semiconductor chip, source electrode or sealing glass exposed. A film **1** which comprises a substrate **3** and an adhesive layer **5**, wherein the storage elastic modulus at 180 degrees centigrade of the substrate **3** is from 10 to 100 MPa, and the adhesive layer **5** is a reaction cured product of a composition for adhesive layer comprising a specific acrylic polymer and a polyfunctional isocyanate compound, wherein the number of moles M_{OH} of hydroxy groups and the number of moles M_{COOH} of carboxy groups, derived from the acrylic polymer, and the number of moles M_{NCO} of isocyanate groups derived from the polyfunctional isocyanate compound, satisfy a specific relation, and which is suitable as a mold release film for producing a semiconductor element.

Classifications:

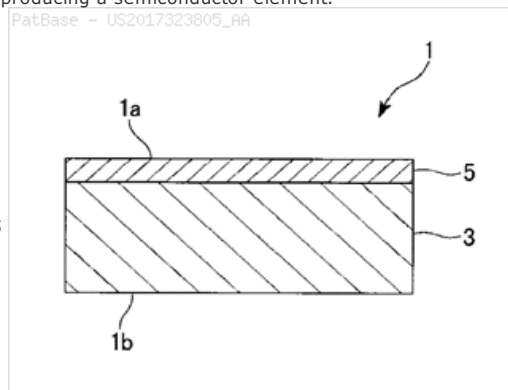
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H01L27/14 (Advanced/Invention)

CPC: C09J7/0275 C09J2203/326 H01L21/565 H01L23/3107 C08F290/067 C08G18/4854 C08G18/757 C08K9/10 H01L21/568 H01L23/293 H01L23/4334 H01L23/49537 H01L23/49551 H01L23/49575 H01L27/14 C09J2205/11 C09J2475/00 C08G2170/40 C09J2205/102 H01L2224/26145 H01L2224/83139 H01L2224/27013 H01L2224/29101 H01L2224/2929 H01L2224/29339 H01L2224/29499 H01L2224/40247 H01L2224/26175 B29C33/68 B32B27/00 C09J7/243 C09J7/20 B32B27/30 C08G18/6229 C08G18/6262 C08G18/792 C08G18/8029 C08K2201/017 C08L65/00 C09J7/22 C09J7/24 C09J7/38 C09J133/00 C09J133/066 C09J175/04 C09J2201/622 C09J2427/006 C09J2433/00 H01L21/566 H01L2224/16227 H01L2224/16245 H01L2224/48091 H01L2224/48227 H01L2224/48247 H01L2224/97 H01L2924/15311 H01L2924/18161 H01L2924/00014 H01L2224/81 C08K5/43 C08K5/0075

JP F-Term: 4F100 4F100/AH03 4F100/AK04 4F100/AK17 4F100/AK25 4F100/AL01 4F100/BA02 4F100/CA22 4F100/EH46 4F100/GB41 4F100/JA07 4F100/JA20 4F202 4F202/AA36 4F202/AB03 4F202/AD19 4F202/AG03 4F202/AH37 4F202/AR20 4F202/CA12 4F202/CB01 4F202/CB12 4F202/CB17 4F202/CD30 4F202/CM73 4F202/CM84 5F061 5F061/AA01 5F061/BA04 5F061/CA21 5F061/CA22 5F061/DA01 5F061/DA12 5F061/EA01

JP F-Index: B29C33/68 B32B27/00/L B32B27/30/A B32B27/30/D H01L21/56/T



Family:

Publication number	Publication date	Application number	Application date
CN107210236 A	20170926	CN201680008936	20160202
DE112016000628 T5	20171102	DE201611000628T	20160202
JP2016125796 A1	20171116	JP20160573381T	20160202
JP6477732 B1	20190306	JP20160573381T	20160202
KR20170115481 A	20171017	KR20177015822	20160202
PH2017501228 A	20171030	PH20170501228	20170630
SG11201706310U A1	20170928	SG20171106310	20160202
TW201634630 A	20161001	TW20160103774	20160204
US2017323805 AA	20171109	US20170662432	20170728
US10141204 BB	20181127	US20170662432	20170728
WO16125796 A1	20160811	WO2016JP53072	20160202

Priority:

JP20150022691 20150206 WO2016JP53072 20160202 US20170662432 20170728

Probable Assignee: AGC INC

Assignee(s): (std): AGC INC ; ASAHI GLASS CO LTD

Assignee(s): N A ; ASAHI GLASS CO
Inventor(s): (std): KASAI WATARU ; KOTERA SEIGO ; SUZUKI MASAMI
Agent(s): OBLON MCCLELLAND MAIER NEUSTADT LLP; SENMYO KENJI ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU
CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN
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MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN
ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW