

Search history

Search PN=(FR2973393) (Results 1)

1:

Search [SP]: nanocomposite luminescent organique-inorganique a base de nanoparticules de zno et son procede de fabrication l'invention
 2: concerne le domaine des materiaux 5 nanocomposites, et notamment des materiaux nanocomposites fluorescents. les points quantiques ou " quantum dots " sont des nanoparticules ou nanocristaux de materiaux semi-conducteurs. ils sont utiles dans un certain nombre 10 d'applications en raison de leurs proprietes optiques, en particulier de leur fluorescence. ils sont notamment frequemment utilises comme marqueurs de molecules et de structures biologiques, en raison de leur faible dimension associee a une fluorescence elevee. ils peuvent egalement 15 trouver d'autres applications dans la fabrication de materiaux nanocomposites, notamment dans le domaine des cellules photovoltaïques. les cellules photovoltaïques sont des composants electroniques qui, exposes a la lumiere, generent de 20 l'electricite. les cellules photovoltaïques sont generelement constituees d'un materiau semi-conducteur, le plus souvent du silicium, avec des zones dopees p et des zones dopees n, afin de creer une jonction p-n. le semi-conducteur constitue le milieu dit photoactif a l'interieur 25 duquel la lumiere est absorbee, creant ainsi des paires electrons-trous. le deplacement de ces electrons et trous genere ainsi une source de courant electrique. un des principaux defis dans le domaine des cellules photovoltaïques est d'ameliorer le rendement de 30 conversion tout en maintenant, voire en diminuant les couts. une des solutions possibles consiste a utiliser une plus grande partie du spectre solaire que ce que les cellules actuelles utilisent. en effet, les cellules 20 photovoltaïques sont la plupart du temps constituees de silicium semi-conducteur. elles n'absorbent donc que les photons qui ont une energie superieure a la bande interdite (" gap ") du semi-conducteur. de plus, quelle que soit l'energie d'un photon incident, il est absorbe en ne donnant naissance qu'a au plus une paire electron-trou, meme dans le cas ou ce photon a une energie superieure au double de la valeur de la bande interdite. ces photons de haute energie ne sont donc pas convertis de facon optimale. par consequent, les cellules photovoltaïques n'ont un rendement optimal que pour la partie visible du spectre solaire. une des solutions envisagees pour augmenter le rendement de conversion des cellules photovoltaïques consiste a mieux utiliser le spectre ultraviolet de la lumiere solaire en convertissant les photons du spectre ultraviolets en photons du spectre visible. cette etre realisee par des composes types de composes fluorescents peuvent etre colorants, les composes comportant des ions les nanoparticules semi-conductrices. colorants permettent d'obtenir un rendement luminescence eleve et presentent l'avantage 25 d'etre disponibles dans une large gamme de couleurs de lumiere emise. cependant leur photostabilite est souvent trop faible. les composes comportant des ions terres rares, c'est-a-dire de la famille du lanthane (lanthanides) 30 present eux l'inconvenient d'avoir des bandes d'absorbance etroites et donc de ne collecter qu'une tres faible fraction de l'energie solaire. conversion peut fluorescents. trois envisages: les terres rares et les quantique de pour eviter ces inconvenients, il a ete propose d'utiliser des nanoparticules semi-conductrices permettant la conversion de la lumiere ultraviolette en lumiere visible. classiquement, les nanoparticules utilisees dans ce but sont constituees de semi-conducteurs de type ii-vi. on peut notamment citer les nanoparticules de cdte, de cdse ou de cds. cependant, ces nanoparticules ont de nombreux inconvenients. leur rendement quantique de luminescence est loin d'etre optimal, en raison des pertes dues a la reabsorption par les nanoparticules d'une partie des photons qu'elles ont elles-memes emis. de plus, l'incorporation des nanoparticules dans une matrice support pose souvent probleme. lors de l'incorporation, les nanoparticules peuvent etre degradees ou etre mal dispersees, ce qui conduit a une reduction de leur rendement quantique de luminescence. un autre inconvenient lie a l'utilisation des nanoparticules semi-conductrices habituellement utilisees, telles que les nanoparticules de cdse et de cds, est leur toxicite. celle-ci resulte principalement de la decomposition de ces materiaux qui conduit a la liberation d'ions metalliques lourds, tels que les ions cadmium. ceux-ci entraînent la formation d'especes reactives de l'oxygene nefastes pour l'organisme. la toxicite de ces materiaux a mene a l'etablissement de reglementations environnementales et de normes de securite qui limitent considerablement leur facilite de fabrication et d'utilisation. afin de resoudre ces problemes, la presente invention propose un nanocomposite luminescent organique-inorganique ayant des proprietes d'absorption dans l'ultraviolet et d'emission dans le visible et comprenant une matrice polymere et des nanoparticules de zno incorporees dans la matrice polymere. l'incorporation des nanoparticules d'oxyde de zinc, zno, dans une matrice polymere permet de former un materiau hybride organique/inorganique presentant des structures et des proprietes utiles dans de nombreuses applications. le spectre d'absorption du nanocomposite se situe essentiellement dans la region ultraviolette du spectre electromagnetique, ce qui lui permet d'absorber les photons du spectre uv de la lumiere solaire tout en n'interagissant pas avec les photons du spectre visible. ceux-ci se propagent donc dans le nanocomposite comme si celui-ci etait essentiellement transparent. cela permet d'utiliser le nanocomposite dans toutes les applications requerant une transparence dans le visible. de plus, le spectre d'emission du nanocomposite se situe essentiellement dans le spectre visible, ce qui lui permet d'emettre par fluorescence des photons dont l'energie est adaptee pour l'excitation d'un semi-conducteur, tel que le silicium, dans des cellules photovoltaïques. les proprietes d'emission dans le visible du nanocomposite sont egalement utiles dans d'autres applications, notamment pour utiliser ces nanocomposites dans des dispositifs d'affichage. le nanocomposite de l'invention presente des spectres d'absorption et d'emission sensiblement distincts. on evite ainsi que le nanocomposite reabsorbe lui-meme les photons qu'il a emis, ce qui permet d'augmenter le rendement quantique de luminescence du nanocomposite. l'utilisation de nanoparticules de zno est egalement avantageuse en termes de toxicite par rapport aux semi-conducteurs de type ii-vi, tels que le cete, le cdse et le cds qui contiennent des ions metalliques toxiques susceptibles d'etre liberes dans l'environnement. de facon preferee, le nanocomposite comprend de 0,1 percent en poids a 3 percent en poids, de preference, de 0,5 percent en 5 poids a 2 percent en poids de nanoparticules de zno. lorsque le nanocomposite contient une trop faible quantite de nanoparticules, il n'absorbe pas suffisamment les photons du spectre ultraviolet, et ne joue donc pas son role de materiau fluorescent. lorsque le nanocomposite 10 contient une trop grande quantite de nanoparticules, il y a un risque d'agregation des nanoparticules et ces agregats diffusent alors la lumiere, ce qui nuit aux performances optiques generales du systeme et donc aux applications recherchees. 15 avantageusement, les nanoparticules de zno ont une granulometrie moyenne entre 1 et 10 nm, de preference entre 3 et 7 nm, et de facon encore plus preferee d'environ 5 nm. on peut ajuster la granulometrie des 20 nanoparticules lors de leur production en faisant varier les conditions reactionnelles, telles que la quantite de precurseur de zno, le solvant, la temperature ou autres. l'ajustement de la granulometrie moyenne des nanoparticules permet notamment d'ajuster leurs proprietes optiques en 25 fonction de l'application recherchee, et en particulier leurs spectres d'absorption et d'emission. on peut ainsi obtenir des nanoparticules emettant dans differentes parties du spectre visible, et donc obtenir des nanocomposites emettant en differentes couleurs. 30 dans un mode de realisation particulier, les nanoparticules de zno sont enrobees par au moins un ligand choisi parmi les ligands de fonctionnalisation des nanoparticules. l'enrobage des nanoparticules cree une structure " noyau-coquille " qui peut notamment faciliter la dispersion des nanoparticules en milieu aqueux ou dans la matrice polymere du nanocomposite. le ou les ligands peuvent notamment etre choisis parmi les composes portant une fonction carboxyle ou une fonction amine. ils peuvent en particulier etre choisis parmi les acides gras a longue chaine tels que l'acide oleique. le polymere composant la matrice est de preference a base d'unites acryliques. le polymere composant la matrice peut etre a base d'unites monomeres photopolymérisables telles que des unites monomeres acryliques, et la matrice polymere peut avoir ete obtenue par photopolymérisation. a titre d'exemples de monomeres acryliques pouvant etre utilises dans l'invention, on peut citer les monomeres difonctionnels, tels que le polyethylene glycol diacrylate, notamment le polyethylene glycol (400) diacrylate disponible aupres de sartomer sous le nom sr344 les monomeres trifonctionnels, tels que le triacrylate de trimethylolpropane les monomeres tetrafonctionnels, tels que le tetraacrylate de pentaerythritol ethoxyle, disponible aupres de sartomer sous le nom sr494. parmi les monomeres preferes, on peut egalement citer les epoxy acrylates, et notamment l'oligomere epoxy diacrylate de bisphenol a, disponible aupres de cytec sous le nom e600. toutefois, l'homme du metier appreciera que d'autres monomeres photopolymérisables puissent etre utilises. lorsque la matrice polymere est obtenue par photopolymérisation, celle-ci (Results 0)

Search [SP]: luminescent organic-inorganic nanocomposite multilayer or monolayer film, usefull as layer for converting photons of ultraviolet
 3: spectrum into photons of visible spectrum, comprises polymer matrix, and zinc oxide nanoparticles nanocomposite luminescent organique-inorganique a base de nanoparticules de zno et son procede de fabrication the luminescent organic-inorganic nanocomposite multilayer or monolayer film comprises a polymer matrix, and zinc oxide nanoparticles (2 weight percent) incorporated in the polymer matrix. the nanoparticles have an average granulometry of 3-7 nm, and are coated by a ligand consisting of a functionalization ligand, compounds having a carboxyl function or an amine function and long chain fatty acids such as oleic acid. the polymer matrix comprises acrylic units and photopolymerizable monomeric units such as acrylic monomer units, and is obtained by photopolymerization. the luminescent organic-inorganic nanocomposite multilayer or monolayer film comprises a polymer matrix, and zinc oxide nanoparticles (2 weight percent) incorporated in the polymer matrix. the nanoparticles have an average granulometry of 3-7 nm, and are coated by a ligand consisting of a functionalization ligand, compounds having a carboxyl function or an amine function and long chain fatty acids such as oleic acid. the polymer matrix comprises acrylic units and photopolymerizable monomeric units such as acrylic monomer units, and is obtained by photopolymerization. the film coats a surface of a support made of glass or plastic material, and provides maximum absorption at a wavelength of less than 375 nm and/or minimum emission at a wavelength of 450-600 nm. the monolayer film has a thickness of 100 nm, and the multilayer film has a thickness of 500 nm to 50 mu m. an independent claim is included for a process for manufacturing a luminescent organic-inorganic nanocomposite multilayer or monolayer film. l'invention concerne un nanocomposite luminescent organique-inorganique ayant des proprietes d'absorption dans l'ultraviolet et d'emission dans le visible et comprenant une matrice polymere et des nanoparticules de zno incorporees dans la matrice polymere. ce nanocomposite permet de convertir des photons du spectre ultraviolet en

photons du spectre visible avec un rendement de conversion ameliore. l'invention concerne egalement un procede de production du nanocomposite, et les utilisations du nanocomposite, notamment dans le domaine des cellules photovoltaïques et des dispositifs d'affichages. (Results 0)

Search glass and aluminosilicate and laminate and layer (Results 2204)

4:

Search 4 and tac=(glass and aluminosilicate and layer) (Results 231)

5:

Search 5 and inner and outer (Results 84)

6:

Search 6 and tempered (Results 29)

7:

Search 7 and thickness (Results 29)

8:

Title: GLASS FEEDERS**Abstract:** ABSTRACT OF THE DISCLOSURE

A feeder construction having a central glass delivery Container surrounded by an outer glass delivery Chamber which are in communication along a delivery passage at their lower extents, is provided for forming stratified or composite sheets or ribbons of vitreous material within 15 a confined space directly from separate supplies of molten glass. B

Classifications:

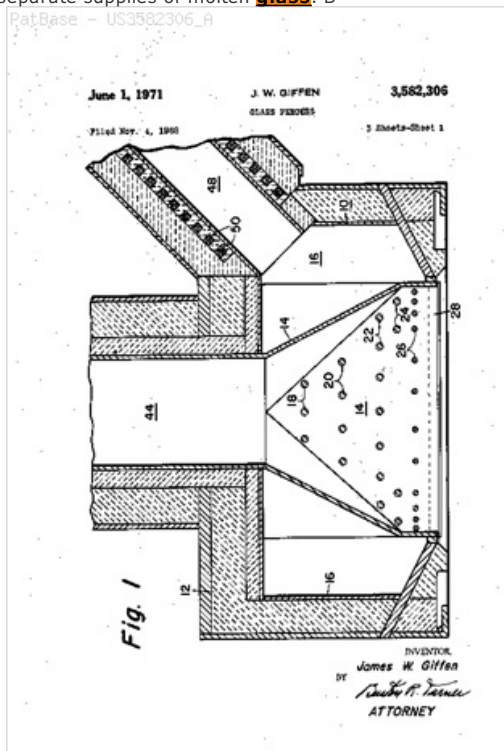
International (ipc 8-9): B32B17/06 C03C17/02 (Advanced/Invention); B32B17/06 C03C17/02 (Core/Invention)

International (ipc 1-7): B32B17/00 B32B31/00 C03B17/00 C03B17/02 C03B23/00 C03B27/00 C03B32/00 C03C17/00 C03C17/02 C03C23/00 C03C27/00 C03C3/00 C03C3/22 C04B39/00 C22B7/00 C22B9/02

CPC: C03B17/02

European: B32B17/06 C03C17/02

US: 65/121 65/145 65/53 65/98

**Family:**

Publication number	Publication date	Application number	Application date
BE734130 A	19691205		19690605
BE741135 A	19700430		19691031
BR6909458 A0	19730125	BR19690209458	19690604
BR6913787 A0	19730426	BR19690213787	19691031
CA920818 A1	19730213	CA19690052666	19690527
DE1926824 A1	19691211	DE19691926824	19690527
DE1926824 B2	19760701	DE19691926824	19690527
DE1926824 C3	19780907	DE19691926824	19690527
DE1954423 A1	19700917	DE19691954423	19691029
DE1954423 B2	19800124	DE19691954423	19691029
DE1954423 C3	19801002	DE19691954423	19691029
FR2010268 A1	19700213	FR19690018517	19690605
FR2022511 A6	19700731	FR19690037581	19691031
GB1264411 A	19720223		19690530
GB1280332 A	19720705	GB19690053727	19691103
NL140498 B	19731217	NL19690008555	19690605
NL140498 C	00000000		00000000
NL158764 B	19781215	NL19690016518	19691103
NL6908555 A	19691209	NL19690008555	19690605
NL6916518 A	19700508	NL19690016518	19691103
US3582306 A	19710601	US19680773173	19681104

Priority:

US19680735074 19680606 US19680773173 19681104

Probable Assignee: CORNING INC

Assignee(s): (std): CORNING GLASS WORKS ; CORNING INC ; VIDROS CORNING DO BRASIL LTDA

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Title: GLASS LAMINATED BODIES COMPRISING A TENSILELY STRESSED CORE AND A COMPRESSIVELY STRESSED SURFACE LAYER FUSED THERETO

Abstract: This invention relates to sound, high strength, laminated articles of glass, glass-ceramic, glass and glass-ceramic materials. Such articles are made by means of a continuous hot-forming process wherein glasses are melted for the individual layers and these layers are then simultaneously fused together and shaped into a laminated structure of a desired configuration. Where a glass-ceramic article is desired, the laminated glass structure is subsequently heat treated in a particular manner to cause the glass to crystallize in situ.

Classifications:

International (IPC 8-9): C03B17/02 C03B27/00 C03C10/00 C03C17/02 C03C27/12 C03C3/087 C03C3/091

C03C4/00 (Advanced/Invention);

C03B17/00 C03B27/00 C03C10/00 C03C17/02 C03C27/12

C03C3/076 C03C4/00 (Core/Invention)

International (IPC 1-7): B32B17/06 B32B7/02 C03B27/00

CPC: C03C3/091 C03C10/00 C03C10/0036 C03C10/0045

C03C10/0054 C03C4/00 C03B17/02 C03B27/00 C03C3/087

C03C10/0018 C03C17/02 C03C2204/04 Y10T428/2495 Y10T428/315

European: C03B17/02 C03B27/00 C03C10/00 C03C10/00C

C03C10/00E C03C10/00E2 C03C10/00K C03C17/02 C03C3/087

C03C3/091 C03C4/00 M03C204/04

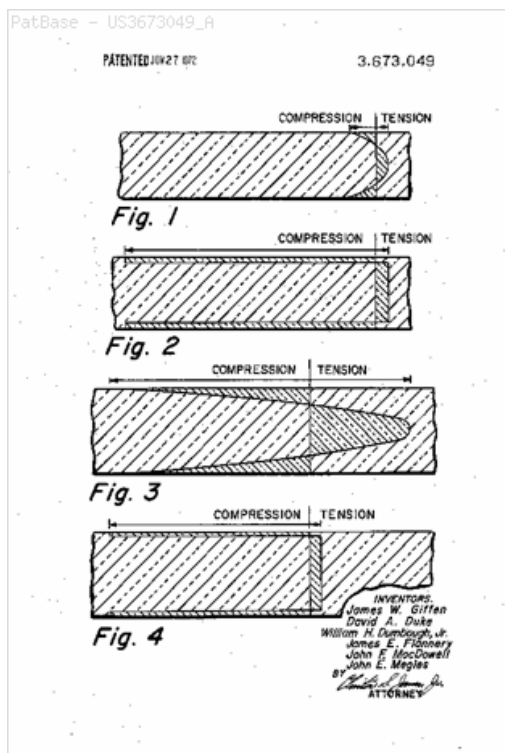
US: 106/39R 106/48 106/54 156/163 161/164 161/165 161/166

161/193 264/332 428/213 428/410 428/428 501/32 501/57 501/59

501/6 501/64 501/65 501/66 501/67 501/68 501/69 501/7 501/70

501/8 501/9 65/114 65/121 65/145 65/3.3 65/33.5 65/33.7 65/41

65/53



Family:

Publication number	Publication date	Application number	Application date
US3673049 A	19720627	US19700078763	19701007
US3849097 A	19741119	US19720238118	19720327

Priority:

US19700078763 19701007 US19720238118 19720327

Probable Assignee: CORNING INC

Assignee(s): (std): CORNING GLASS WORKS ; CORNING INC

Assignee(s): CORNING GLASS WORKS US

Inventor(s): (std): MEGLES JOHN E ; MEGLES J ; MACDOWELL JOHN F ; MACDOWELL J ; GIFFEN JAMES W ; GIFFEN J ; FLANNERY JAMES E ; FLANNERY J ; DUMBAUGH WILLIAM H JR ; DUMBAUGH W ; DUKE DAVID A ; DUKE D

Inventor(s): DAVID A DUKE ; DUKE D US ; DUMBAUGH W US ; FLANNERY J US ; GIFFEN J US ; JAMES E FLANNERY ; JAMES W GIFFEN ; JOHN E MEGLES ; JOHN F MACDOWELL ; MACDOWELL J US ; MEGLES J US ; WILLIAM H DUMBAUGH JR

Title: GLASS ARTICLES HAVING PROTECTED EDGE PORTIONS

Abstract: 1359167 Protecting edges of glass laminates GLAVERBEL 21 May 1971 16284/71 Heading B5N [Also in Division C1] An article having an edge portion of glass or glass-ceramic containing compressive surface stresses due to chemical tempering has a protective covering or coverings adhered thereto and comprising fibre reinforced plastics material or one or more plastics coated or plastics impregnated filaments or rovings. The articles may be plane or curved glass sheets, glass laminated panels, plane or curved, or containers such as flower bowls. As shown, a sheet 35, Fig. 2, is provided with two rovings 36 of fibres of E type glass impregnated with phenoxyl resin and secured to the edge by a neoprene-based adhesive layer 37. In Fig. 3, two sheets 39, 40 joined by a sheet 38 of polyvinylbutyral have two glass-fibre plastics impregnated rovings 41 secured direct to the edges of the sheets by fusing to the layer 38. A layer, similar to layer 37 may also be used. In addition to the chemical tempering, which may be effected only on the edges by protecting the remaining areas with paraffin wax, the article edges may be abraded, particularly to give the edge a flat bevelled profile, and the glass edges may be treated to reduce the impairment of the surface, as by a fluorine-containing agent such as an aqueous solution of hydrofluoric acid alone or with sulphuric acid. The sheets may also be thermally tempered. Chemical tempering is preferably by molten salt contacting medium, but a gas, a paste or a vapour may be used and, for sodium containing glass, the sodium ion may be replaced by larger ions, as potassium, or smaller, lithium, ions. In examples, for a lithium containing glass, a mixture of NaCl and MgCl 2 or of NaCl and AlCl 3, the latter being followed by a bath of KNO 3 with acid treatment both before and after. For an alumino-silicate glass a bath of LiNO 3 + NaCl; for soda-lime glass a bath of KNO 3 alone; with K 2 CO 3 or with CO 2 gas passed through. Alternatively, a sheet in KNO 3 was removed immediately to leave a coating film which was then irradiated with infra-red irradiation to heat the inner layers of the sheet, the surface layers being maintained below 490° C. by blowing air, the sheet then being rapidly cooled and washed to effect both chemical and thermal tempering. In addition to glass fibres or rovings, nylon fibres may be used. A larger variety of suitable plastics material is given including polyesters, phenol formaldehyde and elastomer plastics such as silicone or elastomers vulcanized in situ. Thermoplastics suggested include cellulose propionate, polyvinyl chloroacetate, polyvinyl acetate or polyethylene or elastomers such as acrylonitrile styrene copolymers. Combinations of polymers such as acrylonitrile-butadienestyrene/polyvinyl chloride. Phenoxyl resins may be used. A continuous process is disclosed for plastics impregnated or coated threads or rovings in which the roving is passed through a solution of the thermoplastic and dried by heating. The coated roving is then applied to the edge by a hot air welding gun (46) having a guide ring (51) for the roving (43) and guide sheath (49) which has a pressing shoe (45) to press the roving (43) on to the edge of a glass panel (44). Specifications referred to are 1,274,731, 1,359,165 and 1,358,061.

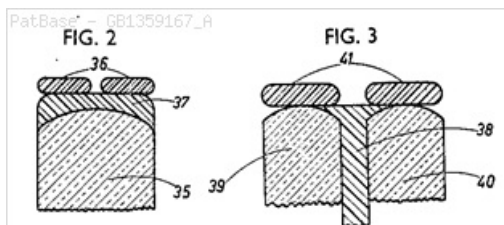
Classifications:

International (IPC 8-9): B32B17/10 C03C27/12 (Advanced/Invention); B32B17/06 C03C27/12 (Core/Invention)

International (IPC 1-7): B32B17/00 B32B17/06 B32B17/10 B65D85/48 C03B25/00 C03B27/00 C03B33/06 C03C15/00 C03C17/00 C03C17/06 C03C17/22 C03C17/28 C03C19/00 C03C21/00 C03C27/00 C03C27/12

CPC: B32B17/10155 B32B17/10302 B32B17/10761 B32B27/306 B32B2329/06 B32B17/10036

European: B32B17/10C4 B32B17/10E16B B32B17/10G28



Family:

Publication number	Publication date	Application number	Application date
AR197083 A1	19740315	AR19720241993	19720512
AU197242479 A1	19731220	AU19720042479	19720518
BE783460 A	19721116	BE19720783460	19720515
BG20325 A3	19751105	BG19720020463	19720512
BR7203053 A0	19730920	BR19720003053	19720515
DD101655 C	19731112	DD19720163069	19720518
DD104965 A	19740405	DD19720170969	19720518
DD104965 C	19740405	DD19720170969	19720518
DE2223275 A1	19721207	DE19722223275	19720512
ES403417 A1	19750416	ES19720403417	19720519
ES403418 A1	19751201	ES19720403418	19720519
FR2138709 A1	19730105	FR19720017360	19720515
GB1359167 A	19740710	GB19710016284	19710521
HU166226 P	19750228	HU1972GA01096	19720512
IL39423 A0	19720726	IL19720039423	19720511
IT954774 A	19730915	IT19720068296	19720427
NL7206887 A	19721123	NL19720006887	19720520
RO61851 P	19770915	RO19720070870	19720512
ZA7203253 A	19730328	ZA19720003253	19720512

Priority:

GB19710016284 19710521

Probable Assignee: GLAVERBEL

Assignee(s): (std): GLAVERBEL ; GLAVERBEL SOC ; LA SOC GLAVERBEL

Assignee(s): GLAVERBEL S A 166 CHAUSSEE DE LA HULPE WATERMAEL BOITSFORT ; GLAVERBEL SA ; GLAVERBEL MECANIVER ; GLAVERBEL S A ; GLAVERBEL S A 166 CHAUSSEE DE LA HULPE WATERMAEL B

Inventor(s): (std): TOUSSAINT FRANCOIS ; SCHOTTEY JEAN ; LAROCHE PIERRE ; LAMBERT EMMANUEL ; TOUSSAINT F ; SCHOTTEY J ; LAROCHE P ; LAMBERT E

Inventor(s): JEAN SCHOTTEY ; FRANCOIS TOUSSAINT ; EMMANUEL LAMBERT ; PIERRE LAROCHE

Title: ION-EXCHANGE STRENGTHENED ELECTRICALLY-HEATED GLASS

Abstract: ABSTRACT OF THE DISCLOSURE

Chemically strengthened, electrically-heatable glass for vehicle windows and the like, and a method of making it, comprising the steps of coating at least one surface of a soda aluminosilicate glass with an electroconductive paste to form a resistance heating grid, drying, firing the coated glass to a temperature sufficient to fuse the paste, and if desired, to sag the glass, and finally subjecting the fired glass to a source of exchangeable K⁺ ions at a temperature below the strain point of the glass for a time sufficient to form a compressively stressed surface layer thereon. B

Classifications:

International (IPC 8-9): C03C17/06 C03C21/00 H01B1/16 H05B3/84 (Advanced/Invention)

International (IPC 1-7): C03C17/00 C03C21/00

CPC: C03C17/06 C03C21/005 C03C2217/251 C03C2218/17 H01B1/16 H05B3/84

European: C03C17/06 C03C21/00B4 H01B1/16 H05B3/84 M03C217/251 M03C218/170

US: 65/30.14 65/60.2

Family:

Publication number	Publication date	Application number	Application date
US3723080 A	19730327	US19710115125	19710212

Priority:

US19710115125 19710212

Probable Assignee: CORNING INC

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Assignee(s): CORNING GLASS WORKS US

Inventor(s): (std): HOWELL R ; PANZARINO J

Inventor(s): PANZARINO J US ; HOWELL R US

Title: FIRE RESISTANT WINDOWS

Abstract: A window composed of a frame having at least two, parallel disposed, spaced **glass** panes. At least one of the panes is composed of fire-resistant **glass**. The fire resistant pane can be a borosilicate or alumino silicate **glass** having a compressive prestress in the peripheral edge portion thereof, and for which the product of thermal expansion alpha and the elastic modulus E is 1-5 kp.times. cm -2.times. degrees centigrade -1.

Classifications:

International (IPC 8-9): B32B17/10 C03C10/00

E06B5/16 (Advanced/Invention);

B32B17/06 C03C10/00 E06B5/10 (Core/Invention)

International (IPC 1-7): B32B17/00 C03C27/06 C03C27/12

C03C3/00 C03C3/30 E04B1/94 E04C2/38 E06B3/24 E06B5/16

CPC: Y10S428/92 Y10T428/315 B32B17/10761 B32B17/10045

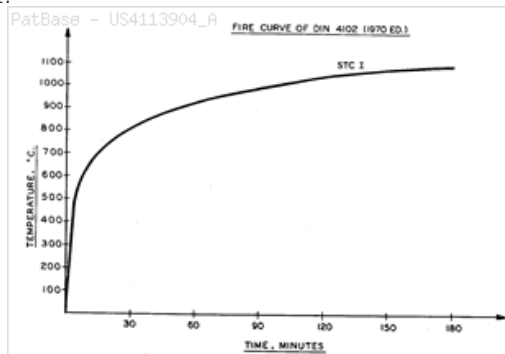
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B32B17/10E16B B32B17/10G28 C03C10/00 E06B5/16D

US: 156/109 156/99 428/34 428/410 428/426 428/920 501/69

52/171.3



Family:

Publication number	Publication date	Application number	Application date
BE836201 A	19760401	BE19756045277	19751202
DE2456991 A1	19760616	DE19742456991	19741203
FR2293536 A1	19760702	FR19750036688	19751201
FR2293536 B1	19790601	FR19750036688	19751201
GB1479566 A	19770713	GB19750049521	19751202
IT1051325 A	19810421	IT19750069969	19751202
JP51109121 A2	19760927	JP19750144560	19751202
US4113904 A	19780912	US19750637424	19751203

Priority:

DE19742456991 19741203

Probable Assignee: JENAER GLASWERK SCHOTT AND GEN

Assignee(s): (std): JENAER GLASWERK SCHOTT AND GEN

Assignee(s): JENAER GLASWERK SCHOTT ET GEN

Inventor(s): (std): BERUNAA KIIFUAA ; KIEFER W ; KIEFER WERNER ; KIEFER WERNER DIPL CHEM DR

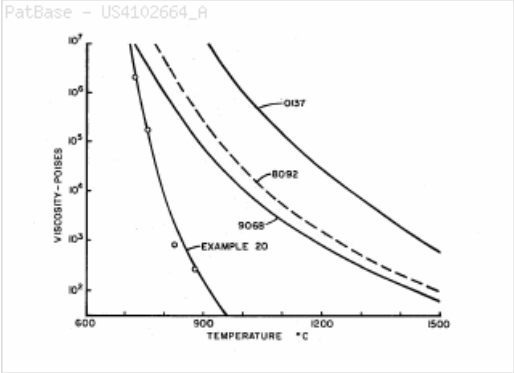
Inventor(s): KIEFER WERNER DIPL CHEMDR ; W KIEFER

Title: Method for making glass articles with defect-free surfaces

Abstract: This invention relates to a method for forming glass articles having essentially defect-free surfaces which can be equivalent in smoothness to that achieved in a polishing operation, and which can demonstrate mechanical strength superior to that exhibited by glass articles produced via conventional glass-forming techniques. The method contemplates melting two different glass compositions, one of which is highly soluble in a given solvent and the second of which is relatively insoluble in the same solvent; the molten glasses are simultaneously brought together while in the fluid state to form a laminated glass body wherein the insoluble glass is essentially completely enveloped within the soluble glass; the laminae are fused together at a temperature where the melts are in fluid form to provide an interface therebetween which is free from defects; the laminated article is cooled; and the soluble outer glass layer is dissolved away in an appropriate solvent. An exchange of ions takes place at the interface between the insoluble glass and the soluble outer glass layer.

Classifications:

International (IPC 8-9): C03B17/02 C03B7/00 C03B7/08 C03C21/00 C03C4/00 (Advanced/Invention); C03B17/00 C03B7/00 C03C21/00 C03C4/00 (Core/Invention)
International (IPC 1-7): C03C19/00 C03C25/02
CPC: C03B7/00 C03B7/08 C03B17/02 C03C4/0064 C03C21/00
European: C03B17/02 C03B7/00 C03B7/08 C03C21/00 C03C4/00L
US: 216/33 216/97 216/99 65/23 65/30.14 65/31



Family:

Publication number	Publication date	Application number	Application date
US4102664 A	19780725	US19770798022	19770518

Priority:

US19770798022 19770518

Probable Assignee: CORNING INC
Assignee(s): (std): CORNING GLASS WORKS ; CORNING INC
Inventor(s): (std): DUMBAUGH JR WILLIAM H

Title: FIRE-SCREENING PANEL

Abstract: A fire-screening glazing panel including a plurality of sheets of vitreous material and at least two spaced **layers** of intumescent material each sandwiched between sheets of the vitreous material. At least two of the plurality of vitreous sheets are internal vitreous sheets sandwiched between the at least two intumescent **layers**, and the at least two internal vitreous sheets are **laminated** together without intervening intumescent material.

Classifications:

International (IPC 8-9): B32B17/06 B32B17/10 C03C27/12 E04B1/94 E06B5/16 (Advanced/Invention);

B32B17/06 C03C27/12 E04B1/94 (Advanced/Non-invention); B32B17/06 C03C27/12 E04B1/94 E06B5/10 (Core/Invention)

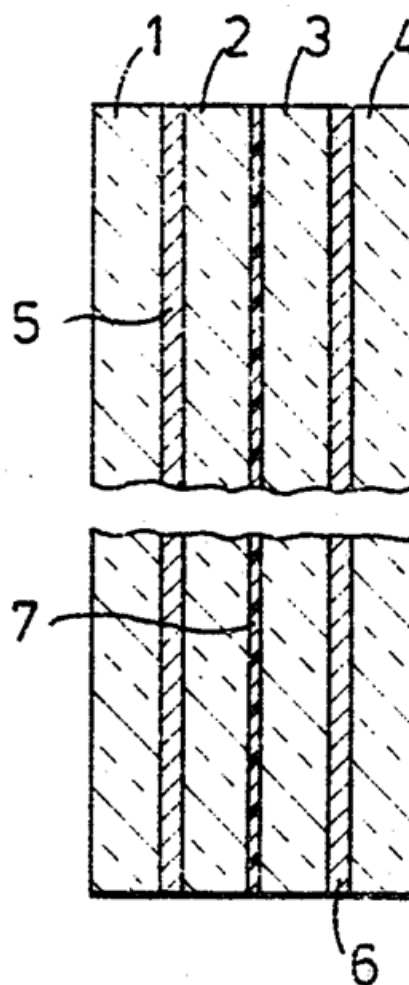
International (IPC 1-7): B32B17/06 B32B17/10 B32B31/04 B32B31/20 B32B9/00 C03C27/12 E04B1/94 E04C2/54 E06B3/66 E06B5/16

CPC: Y10S428/92 Y10S428/921 B32B17/10045 B32B17/10311 Y10T428/2495 Y10T428/24967 Y10T428/3163 B32B7/12 B32B2250/40 B32B17/10761

European: B32B17/10C4B B32B17/10E18 B32B17/10G28

US: 156/104 156/106 156/182 156/286 156/306.6 428/213 428/215 428/428 428/437 428/920 428/921 52/232 52/786.11 52/789

PatBase - US4444825_A



Family:

Publication number	Publication date	Application number	Application date
AT322282 A	19871115	AT19820003222	19820826
AT385950 B	19880610	AT19820003222	19820826
AU198287743 A1	19830303	AU19820087743	19820826
AU554275 B2	19860814	AU19820087743	19820826
BE894168 A	19830223	BE19821010577	19820823
CH651250 A	19850913	CH19820005033	19820824
DE3231975 A1	19830310	DE19823231975	19820827
DE3231975 C2	19860313	DE19823231975	19820827
FR2512008 A1	19830304	FR19820014558	19820823
FR2512008 B1	19860131	FR19820014558	19820823
GB2104838 A1	19830316	GB19810026343	19810828
GB2104838 B2	19850220	GB19810026343	19810828
IT1155915 A	19870128	IT19820068035	19820824
IT8268035 A0	19820824	IT19820068035	19820824
JP2559572 B2	19961204	JP19820147511	19820825
JP58045141 A2	19830316	JP19820147511	19820825
NL192875 B	19971201	NL19820003335	19820826
NL192875 C	19980402	NL19820003335	19820826
NL8203335 A	19830316	NL19820003335	19820826
NO158208 B	19880425	NO19820002916	19820827
NO158208 C	19880803	NO19820002916	19820827
NO822916 A	19830301	NO19820002916	19820827
SE455615 B	19880725	SE19820004915	19820827
SE455615 C	19881117	SE19820004915	19820827
SE8204915 A	19820827	SE19820004915D	19820827
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Priority:

GB19810026343 19810828

Probable Assignee: HELLER FINANCIAL INC

Assignee(s): (std): GLAVERBEL ; GLAVERBEL SA

Assignee(s): GLAVERBEL TE BRUSSEL ; PENSION BENEFIT GUARANTY CORP ; HELLER FINANCIAL INC ; GURABERUBERU SA ; GLAVERBEL BRUESSEL BRUXELLES BE ; GLAVERBEL S A

Inventor(s): (std): ROBERT VANDERSTUKKEN ; ROBEERU BUANDORUSUTONKAN ; R VANDERSTUKKEN ; MARUSERU DO BOURU ; MARCEL DE BOEL ; M DE BOEL ; BOEL MARCEL DE ; VANDERSTUKKEN ROBERT ; DE BOEL MARCEL ; VANDERSTUKKEN R ; DE BOEL M

Inventor(s): BOEL MARCEL DE CHATELET BE ; VANDERSTUKKEN ROBERT RANSART BE

Agent(s): FB RICE; FB RICE PTY LTD

Title: **LAMINATED GLASS** FOR VEHICLES

Abstract: A **laminated glass** for vehicles comprising at least two single **glass** sheets which are **laminated** through at least one interlayer, wherein an outermost single **glass** sheet in a **laminated** comprising at least two single **glass** sheets is an **aluminosilicate glass** containing lithia (Li₂O). The **laminated glass** is suitable as the countermeasure of flying stones when applied to windows of vehicles. The **aluminosilicate glass** sheet is preferably obtained by a float method, and it is also preferably chemically **tempered** by ion exchange.

Classifications:

International (IPC 8-9): B32B17/10 B60J1/00 C03C21/00 C03C27/12 C03C3/087 C03C3/095 (Advanced/Invention); B32B17/06 B60J1/00 C03C21/00 C03C27/12 C03C3/076 (Core/Invention)

International (IPC 1-7): B32B17/00 B60J1/00 C03C21/0 C03C21/00 C03C21/00 C03C27/12 C03C3/083 C03C3/083 C03C3/087 C03C3/095 C03C3/83

CPC: B32B17/10119 B32B17/10137 B32B17/10036 C03C3/087 C03C3/095 C03C21/002 Y10T428/315 Y10T428/3163

European: B32B17/10C4 C03C21/00B2 C03C3/087 C03C3/095

US: 428/410 428/428 428/432 428/437

PatBase - US5928793_A

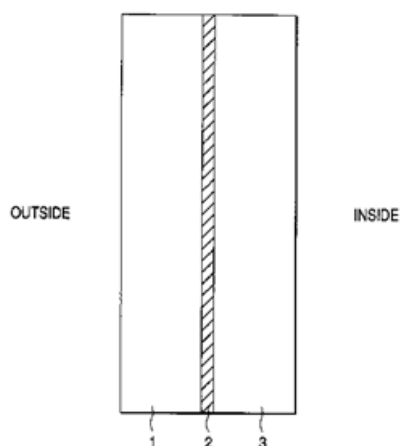
U.S. Patent

Jul. 27, 1999

Sheet 1 of 2

5,928,793

FIG. 1



Family:

Publication number	Publication date	Application number	Application date
DE69801712 D1	20011025	DE19986001712	19980527
DE69801712 T2	20020704	DE19986001712T	19980527
EP0884289 A1	19981216	EP19980109645	19980527
EP0884289 B1	20010919	EP19980109645	19980527
ES2162370 T3	20011216	ES19980109645T	19980527
JP11011988 A2	19990119	JP19970165713	19970623
JP11060294 A2	19990302	JP19980067417	19980317
US5928793 A	19990727	US19980085114	19980528

Priority:

JP19970152247 19970610 JP19970165713 19970623 JP19980067417 19980317

Probable Assignee: NIPPON SHEET GLASS CO LTD

Assignee(s): (std): NIPPON SHEET GLASS CO LTD

Assignee(s): NIPPON SHEET GLASS COMPANY LIMITED ; NIPPON SHEET GLASS CO

Inventor(s): (std): KIMURA MASANOBU

Inventor(s): KIMURA MASANOBU TD

Designated states: BE DE ES FR GB IT

Title: **LAMINATED GLASS** FLOOR TILE AND FLOORING MADE THEREFROM AND METHOD FOR MAKING SAME

Abstract: A **laminated glass** floor tile is disclosed, comprising a **glass** plate, a backing substrate and a decorative **layer** disposed between the **glass** plate and the backing substrate. A **glass** flooring made using **laminated glass** floor tiles is also disclosed, as well as, a method for making a **laminated glass** floor tile comprising the steps of placing a decorative **layer** between a backing substrate and a **glass** plate and laminating the **glass** plate, the backing substrate and the decorative **layer**.

Classifications:

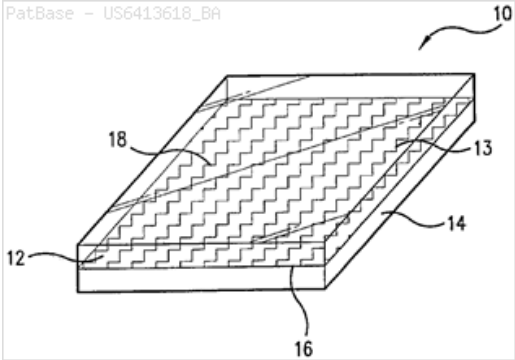
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B32B27/06 B32B3/00 B32B3/14 B44C5/04
E04F15/08 (Advanced/Invention);
B32B27/06 B32B37/10 (Advanced/Non-invention);
B32B17/06 B32B27/06 B32B3/14 B44C5/00
E04F15/08 (Core/Invention);
B32B37/10 (Core/Non-invention)

International (IPC 1-7): B32B17/00 B32B17/06 B32B3/00 B32B3/10
B32B3/14 B32B31/00

CPC: Y10T428/162 Y10T428/166 Y10T428/24802 Y10T428/24876
B32B17/10247 B32B27/06 B32B37/1027 B32B2037/109
B32B2310/0831 B32B2451/00 B44C5/0407 B44C5/0415 B44C5/043
B44C5/0438 B44C5/0446 E04F15/08 B32B7/12 B32B2419/04
B32B3/14 B32B17/10853 B32B37/12 B32B2315/08 B32B17/065

European: B32B17/06 B32B17/10E12 B32B17/10L10B2B2
B32B27/06 B32B3/14 B32B31/00A8B B32B37/12 B44C5/04C
B44C5/04D B44C5/04H B44C5/04J B44C5/04L E04F15/08
L32B31/00A5C L32B310/08B4 L32B315/08 L32B37/10C L32B37/10J L32B451/00

US: 428/195 428/195.1 428/204 428/46 428/49



Family:

Publication number	Publication date	Application number	Application date
AU200049967 A1	20001121	AU20000049967	20000510
AU200049967 A5	20001121	AU20000049967	20000510
CA2373458 AA	20011108	CA20002373458	20000510
US6413618 BA	20020702	US19990309614	19990511
WO0067999 A1	20001116	WO2000US12678	20000510

Priority:

US19990309614 19990511 WO2000US12678 20000510

Probable Assignee: CONGOLEUM CORP

Assignee(s): (std): CONGOLEUM CORP

Assignee(s): DEMPSEY ROBERT ; PARKER ANTHONY A ; ROHRBACHER PETER J ; SABO RICHARD A ; SHOST JOHN A ; WOOTTEN SCOTT M

Inventor(s): (std): DEMPSEY ROBERT ; PARKER ANTHONY A ; ROHRBACHER PETER J ; SABO RICHARD A ; SHOST JOHN A ; WOOTTEN SCOTT M

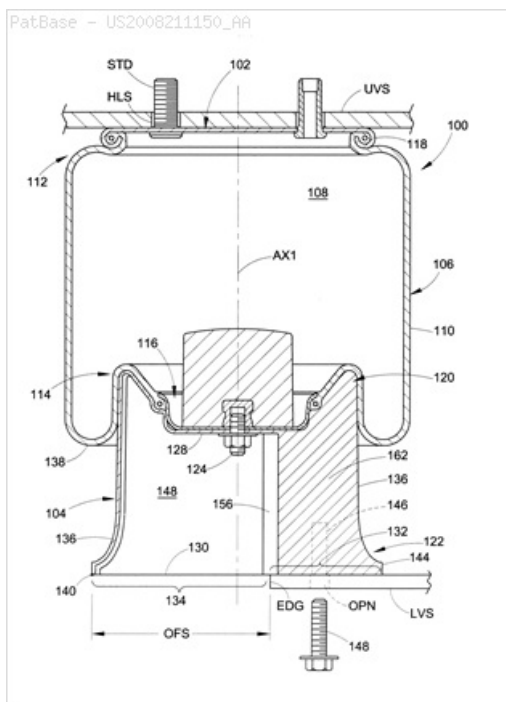
Inventor(s): SCOTT M WOOTTEN ; ROBERT DEMPSEY ; RICHARD A SABO ; PETER J ROHRBACHER ; JOHN A SHOST ; ANTHONY A PARKER

Agent(s): OSLER HOSKIN AND HARCOURT LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY 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 NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Abstract: A piston adapted for use in offset mounting conditions includes a piston body having a longitudinally-extending axis. First and second securement features are located at radially **outer** positions relative to the axis. The first and second securement features are also located on one diametrical side of a midplane of the piston body. A plurality of support walls extends from the diametrically opposite side of the piston body toward the securement features. A gas spring assembly including such a piston is also included.

Classifications
International (IPC 8-9): B05D5/06 B32B17/06 B32B5/00 B32B7/02 B60G11/28 C03C15/00 C03C17/22 C03C17/23 C03C17/30 C03C17/34 C03C17/42 C03C21/00 C03C3/085 C03C3/087 C03C3/091 F16F9/04 F16F9/05 F16F9/32 F16J1/00 F16J1/01 (Advanced/Invention); C03C17/22 C03C17/34 C03C17/42 C03C3/085 (Advanced/Non-invention); B05D5/06 B32B17/06 B32B5/00 B32B7/02 B60G11/26 C03C17/22 F16F9/02 F16F9/32 F16J1/00 (Core/Invention); C03C17/22 C03C17/30 C03C3/085 C03C3/091 (Core/Non-invention)
CPC: B60G11/28 B60G2202/152 B60G2204/126 B60G2204/43 B60G2204/44 B60G2204/4502 B60G2206/424 B60G2206/71 F16F9/057 C03C2217/732 C03C2217/75 C03C2217/76 C03C17/30 C03C3/087 C03C3/091 C03C21/002 C03C2217/42 C03C2217/77 C03C2218/31 Y10T428/24364 Y10T428/24967 Y10T428/266 C03C3/085 C03C17/42
European: B60G11/28 C03C17/30 C03C17/42 C03C21/00B2 C03C3/085 C03C3/087 C03C3/091 F16F9/05P L60G202/152 L60G204/126 L60G204/43 L60G204/44 L60G204/4502 L60G206/424 L60G206/71 M03C217/420 M03C217/770 M03C218/31
US: 267/64.21 267/64.24 267/64.27 267/64.270P 427/165 427/165S 428/142 428/142P 428/215 428/215S 428/220 428/220S 428/337 428/337S 428/426 428/426S 428/428 428/428S 92/248 92/248S 92/92 92/92S



Publication number	Publication date	Application number	Application date
■ CN101939266 A	20110105	CN200980104573	20090205
■ DE602008021538 D1	20130314	DE200860021538T	20080205
■ EP2114703 A1	20091111	EP20080729036	20080205
■ EP2114703 B1	20130109	EP20080729036	20080205
■ EP2252557 A1	20101124	EP20090708945	20090205
■ EP2252557 A4	20130703	EP20090708945	20090205
■ JP2011510904 T2	20110407	JP20100545870T	20090205
■ KR20100125279 A	20011130	KR20107019564	20090205
■ TW200948734 A	20091201	TW20090103588	20090204
■ US2008211150 AA	20080904	US20080026289	20080205
■ US2009197048 AA	20090806	US20090366267	20090205
■ US8061691 BB	20111122	US20080026289	20080205
■ WO08097960 A1	20080814	WO2008US53039	20080205
■ WO09099615 A1	20090813	WO2009US00722	20090205

US20070899456P	20070205	EP20080729036	20080205	US20080026289	20080205
US20080026289P	20080205	WO2008US53039	20080205	US20080130532	20080530
US20080130532P	20080530	US20090366267	20090205	WO2009US00722	20090205

Assignee(s): (std): AMIN JAYMIN ; BACA ADRA S ; BACA ADRA SMITH ; BEALL LORRIE F ; BEALL LORRIE FOLEY ; BELLMAN ROBERT A ; BFS DIVERSIFIED PRODUCTS LLC ; HALL JONATHAN ; LEVY DANIEL I ; CORNING INC ; SABIA ROBERT ; BELLMAN ROBERT ALAN ; OUYANG MIKE XU ; OUYANG MICHAEL X ; CORNING CO LTD

Inventor(s): (std): HALL JONATHAN ; JAYMIN AMIN ; LEVY DANIEL I ; ROBERT SABIA ; OUYANG XU OUYANG ; OUYANG MIKE XU ; OUYANG MICHAEL X ; MORSE ROBERT ALLAN ; BELLMAN ROBERT ALAN ; BELLMAN ROBERT A ; SABIA ROBERT ; BEALL LORRIE FOLEY ; BEALL LORRIE F ; BACA ADRA SMITH ; BACA ADRA S ; AMIN JAYMIN

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 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 ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN VZ ZA ZM ZW

Title: NICORANDIL CARRIERS WITH ENHANCED STABILITY**Abstract:** The invention provides a carrier for nicorandil, which is preferably in form of a blister pack, comprising one or several dose blister pockets each containing at least one tablet of nicorandil, and at least one blister pocket containing a molecular sieve.**Classifications:****International (IPC 8-9):** A61K31/4406 A61K31/455 A61K47/02

A61K8/20 A61K9/20 A61P9/08 (Advanced/Invention);

A61K31/00 A61K31/455 A61K47/00 A61K47/02 A61K8/19

A61K9/00 (Core/Invention);

A61K (Subclass/Invention)

International (IPC 1-7): A61K31/455 A61K47/02 A61K8/20**CPC:** A61K9/20 A61K31/455 A61K47/02**European:** A61K31/455 A61K47/02 A61K9/20**US:** 424/464 424/464P 514/355 514/355S

PatBase - US2011002987_AA

Patent Application Publication Jan. 6, 2011 Sheet 1 of 7 US 2011/0002987 A1

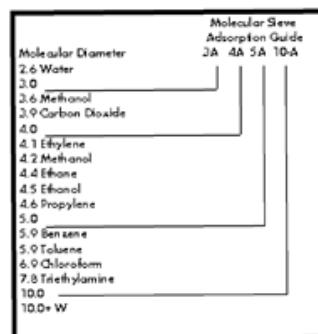


FIGURE 1

Family:

Publication number	Publication date	Application number	Application date
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AU2009221155 BB	20131219	AU20090221155	20090304
CA2716977 AA	20090911	CA20092716977	20090304
CN101970009 A	20110209	CN200980107542	20090304
CN101970009 B	20121226	CN200980107542	20090304
CY1113430 T1	20160622	CY20121101162T	20121129
DE602008019557 D1	20121220	DE200860019557T	20080305
DK2098249 T3	20130107	DK20080152311T	20080305
EA020134 B1	20140829	EA20100071031	20090304
EA201071031 A1	20110228	EA20100071031	20090304
EP2098249 A1	20090909	EP20080152311	20080305
EP2098249 B1	20121024	EP20080152311	20080305
ES2396735 T3	20130225	ES20080152311T	20080305
HK1133820 A1	20130705	HK20090110927	20091123
HR20120987 T1	20130131	HR20120000987	20121203
IN06111CN2010 A	20110603	IN2010CN06111	20100928
NZ587542 A	20120629	NZ20090587542	20090304
PT2098249 T	20130107	PT20080152311T	20080305
SI2098249 T1	20130228	SI20080030856T	20080305
US2011002987 AA	20110106	US20090920253	20090304
WO09109596 A1	20090911	WO2009EP52540	20090304

Priority:

EP20080152311 20080305 WO2009EP52540 20090304

Probable Assignee: RIVOPHARM SA**Assignee(s):** (std): CARCANO MICHELA ; POLI PIERO ; RIVOPHARM SA**Inventor(s):** (std): MICHELA CARCANO ; PIERO POLI ; POLI PIERO ; CARCANO MICHELA**Inventor(s):** CARCANO MICHELA 22026 ; POLI PIERO 6900**Agent(s):** GRIFFITH HACK; CHAJMOWICZ MARION; DE ELZABURU ALBERTO; OHLANDT GREELEY RUGGIERO AND PERLE LLP; CHAJMOWICZ MARION 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 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 ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: GLASS HAVING ANTI-GLARE SURFACE AND METHOD OF MAKING

Abstract: A glass article having an anti-glare surface. The anti-glare surface has a distinctness-of-reflected image of less than 95, and a haze of less than or equal to 50 percent. In one embodiment, the glass article further includes a smudge-resistant surface disposed on the anti-glare surface. Methods of making the glass article and anti-glare surface are also described.

Classifications:

International (IPC 8-9): B32B17/00 B32B3/00 B44C1/22 C03C15/00 C03C17/02 C03C23/00 C03C3/083 C03C3/085 C03C3/087 C03C3/089 C03C3/091 C03C3/093 C03C3/095 C09G1/00 C09K13/08 G02B5/02 G02F1/01 G02F1/1333 G09F9/30 H01J5/16 H01J61/40 (Advanced/Invention);

G02F1/1333 (Advanced/Non-invention);
C03C15/00 G02B5/02 (Core/Invention);

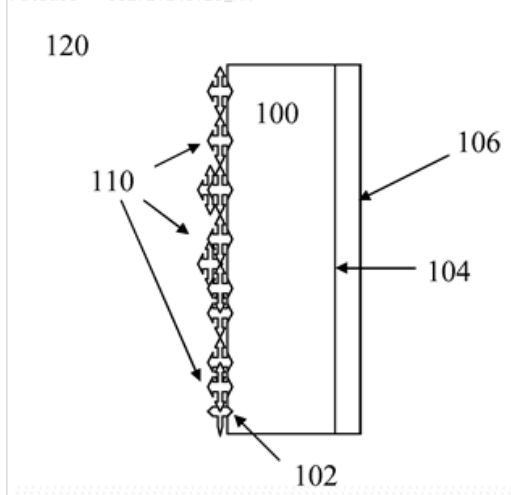
C03C15/00 C03C17/02 C03C3/083 C03C3/091 C09K13/08 G02F1/1333 (Core/Non-invention)

CPC: C03C3/093 C03C2204/08 C09G1/00 C03C23/00 C03C2217/77 G02F1/133502 G02F1/01 C03C15/00 C09K13/08

European: C03C15/00 C03C3/093 M03C204/08 M03C217/770 S02F1/1335A

US: 156/345.11 156/345.110S 216/24 216/24S 216/28 216/31 216/83 313/110 313/110P 313/111 313/112 313/113 313/116 359/599 359/599P 428/141 428/141S 65/30.1

PatBase - US2010246016_AA



Family:

Publication number	Publication date	Application number	Application date
■ CN102448904 A	20120509	CN201080024906	20100326
■ CN102548922 A	20120704	CN201080041943	20100915
■ CN102548922 B	20161019	CN201080041943	20100915
■ EP2414299 A1	20120208	EP20100723413	20100326
■ EP2477954 A1	20120725	EP20100757137	20100915
■ JP2012521958 T2	20120920	JP20120503529T	20100326
■ JP2013504514 T2	20130207	JP20120529868T	20100915
■ JP5784610 B2	20150924	JP20120529868T	20100915
■ KR101739605 B1	20170524	KR20127009603	20100915
■ KR101848219 B1	20180524	KR20177013332	20100915
■ KR20110137820 A	20111223	KR20117025567	20100326
■ KR20120081146 A	20120718	KR20127009603	20100915
■ KR20170059014 A	20170529	KR20177013332	20100915
■ TW201114712 A	20110501	TW20100109510	20100329
■ TW201124353 A	20110716	TW20100130942	20100914
■ TWI496751 B	20150821	TW20100130942	20100914
■ US2010246016 AA	20100930	US20100730502	20100324
■ US2011062849 AA	20110317	US20100858544	20100818
■ US8598771 BB	20131203	US20100858544	20100818
■ US8771532 BB	20140708	US20100730502	20100324
■ WO10117673 A1	20101014	WO2010US28798	20100326
■ WO11034898 A1	20110324	WO2010US48900	20100915

Priority:

US20090165154P 20090331 US20090242529P 20090915 US20100730502 20100324
WO2010US28798 20100326 US20100858544 20100818 WO2010US48900 20100915

Probable Assignee: CORNING INC

Assignee(s): (std): CARLSON KRISTA L ; CORNING CO LTD ; CORNING INC ; HART SHANDON D ; NGUYEN KELVIN ; ZHANG LU ; SABIA ROBERT ; STERNQUIST DANIEL A

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Agent(s): ANDERSON JAMES EDWARD GEORGE; STURM CHRISTOPH; CORNING INC; ROBERT P; SANTANDREA ROBERT P

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 ZA ZM ZW

Title: LAMINATION OF ELECTROCHROMIC DEVICE TO **GLASS** SUBSTRATES

Abstract: Electrochromic device **laminates** and their method of manufacture are disclosed.

Classifications:

International (IPC 8-9): B26F3/06 B32B17/10 B32B37/02 B32B38/00 B32B38/04 B32B38/10 B60J3/04 C03B33/07 C03B33/08 C03B33/09 C03C27/12 E06B3/67 G02F1/1333 G02F1/15

G02F1/153 (Advanced/Invention);

B26F3/06 B60J3/04 E06B3/67 (Advanced/Non-invention)

CPC: B32B17/10045 B32B17/10174 B32B17/10743 B32B17/10761

B32B17/10981 C03B33/076 G02F1/1533 Y10T156/1062

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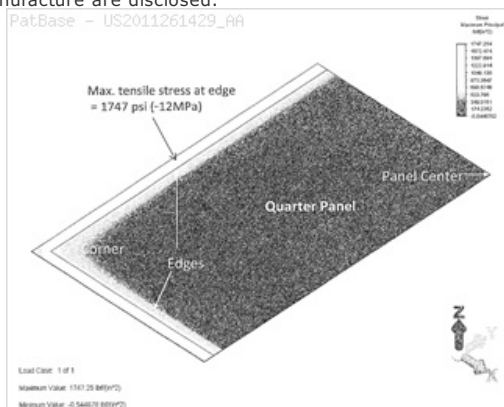
C03B33/0222 C03B33/027 C03B33/091 Y10T156/1052

Y10T156/1064 Y10T156/1089

European: B32B17/10C4B B32B17/10E10 B32B17/10G24

B32B17/10G28 B32B17/10L22 C03B33/07D G02F1/153B

US: 1/1 156/256 156/256S 156/264 156/264 359/265 359/265P



Family:

Publication number	Publication date	Application number	Application date
BR112012022488 A2	20161025	BR20121122488	20110304
CN102883880 A	20130116	CN201180013326	20110304
CN102883880 B	20170208	CN201180013326	20110304
CN106932995 A	20170707	CN201611217082	20110304
DE602011004168 D1	20140206	DE201160004168T	20110304
DE602011035329 D1	20170406	DE201160035329T	20110304
EP2542407 A1	20130109	EP20110708645	20110304
EP2542407 B1	20131211	EP20110708645	20110304
EP2542407 B2	20170322	EP20110708645	20110304
EP2641734 A1	20130925	EP20130173248	20110304
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EP3216597 A1	20170913	EP20170156934	20110304
ES2450520 T3	20140325	ES20110708645T	20110304
ES2450520 T5	20170807	ES20110708645T	20110304
ES2621758 T3	20170705	ES20130173248T	20110304
IN08511DN2012 A	20140711	IN2012DN08511	20120928
JP2013521535 T2	20130610	JP20120556257T	20110304
JP2016106259 A2	20160616	JP20160011861	20160125
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JP6116718 B2	20170419	JP20160011861	20160125
KR20130010899 A	20130129	KR20127026169	20110304
US2011261429 AA	20111027	US20110040787	20110304
US2011267672 AA	20111103	US20110178065	20110707
US2013258437 AA	20131003	US20130906456	20130531
US2013258438 AA	20131003	US20130906487	20130531
US2016187753 AA	20160630	US20160065050	20160309
US8482837 BB	20130709	US20110040787	20110304
US8482838 BB	20130709	US20110178065	20110707
US9182644 BB	20151110	US20130906487	20130531
US9316883 BB	20160419	US20130906456	20130531
WO11109688 A1	20110909	WO2011US27148	20110304

Priority:

US20100311001P	20100305	US20100412153P	20101110	CN201180013326	20110304
EP20110708645	20110304	JP20120556257T	20110304	EP20130173248	20110304
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EP20130173248	20130621	JP20160011861	20160125	US20160065050	20160309
JP20170054795	20170321				

Probable Assignee: SAGE ELECTROCHROMICS INC

Assignee(s): (std): MCCOY MICHAEL A ; SAGE ELECTROCHROMICS INC ; VAN DINE JOHN E ; SBAR NEIL L

Assignee(s): SAGE ELECTROCHROMICS INC FARIBAULT ; SAGE ELECTRONICS INC

Inventor(s): (std): MCCOY MICHAEL ; SBAR NEIL ; VAN DINE JOHN ; NEIL L SBAR ; MICHAEL A MCCOY ; JOHN E VAN DINE ; DINE JOHN VAN ; VAN DINE JOHN E ; SBAR NEIL L ; MCCOY MICHAEL A

Inventor(s): MCCOY MICHAEL A MINNEAPOLIS ; JOHN VAN DINE ; VAN DINE JOHN E FARIBAULT ; SBAR NEIL L NORTHFIELD

Agent(s): MAIWALD PATENTANWALTSGESELLSCHAFT MBH; STOLMAR AND PARTNER PATENTANWALTE PARTG MBH; MAIWALD PATENTANWALTSGESELLSCHAFT MBH; ZIMMERMANN AND PARTNER PATENTANWALTE MBH; ROEB MARIA; DE ELZABURU ALBERTO; LERNER DAVID LITTENBERG AND KRUMHOLZ AND MENTLIK LLP; LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK LLP; ROBERT N; ABEL LAW GROUP LLP; FINETTI THOMAS 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 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 ZA ZM ZW

Title: TRANSPARENT GLASS/POLYMER COMPOSITE

Abstract: A transparent device for protection from an action of shock, projectiles, fragments or shock waves is provided. The device is a **laminate** having brittle-fracture, transparent materials that are joined together by way of transparent intermediate **layers** of organic polymers. The **laminate** is closed on the protective side facing away from the side of action by a fragment-protective **layer** that is formed as a transparent polymer **layer** in a **thickness** of 0.5 mm to 12 mm. The **laminate** has facing the side of action a chemically prestressed, brittle-fracture panel that is at a distance of 3 mm to 20 mm from the side of action.

Classifications:

International (IPC 8-9): B32B B32B17/10 C03C21/00 C03C27/12 F41H5/00 F41H5/04 F41H5/26 (Advanced/Invention);

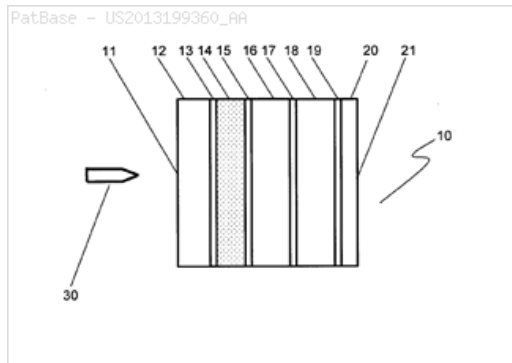
B32B C03C F41H (Subclass/Invention)

CPC: F41H5/0407 B32B17/10045 B32B17/10137 B32B17/10761 B32B17/1077 B32B2369/00

European: B32B17/10C30B B32B17/10C4B B32B17/10G28

B32B17/10G30 F41H5/04B L32B369/00

US: 1/1 89/36.02



Family:

Publication number	Publication date	Application number	Application date
DE102010013641 A1	20111006	DE201010013641	20100401
DE502011002234 D1	20140410	DE201150002234T	20110330
EP2552688 A1	20130206	EP20110715168	20110330
EP2552688 B1	20140226	EP20110715168	20110330
ES2461629 T3	20140520	ES20110715168T	20110330
IL222151 A0	20121129	IL20110222151	20110330
IL222151 A1	20160531	IL20110222151	20110330
US2013199360 AA	20130808	US20110638883	20110330
US9194663 BB	20151124	US20110638883	20110330
WO11120680 A1	20111006	WO2011EP01592	20110330

Priority:

DE201010013641 20100401 EP20110715168 20110330 WO2011EP01592 20110330

Probable Assignee: SCHOTT AG

Assignee(s): (std): KROPFGANS FRIEDER ; SCHAUPERT KURT ; SCHOTT AG ; ZACHAU THILO ; ZACHAU THILO HINRICH

Inventor(s): (std): KROPFGANS FRIEDER ; SCHAUPERT KURT ; SCHAUPERT KURT DR ; ZACHAU THILO ; ZACHAU THILO DR ; ZACHAU THILO HINRICH

Agent(s): LEHMANN MARIA ISABEL; REINHOLD COHN AND PARTNERS; OHLANDT GREELEY RUGGIERO AND PERLE LLP; SCHOTT AG

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 ZA ZM ZW

Title: Transparentes Verbundmaterial fuer Sicherheitsverglasung und ein Verfahren zu dessen Herstellung

Abstract: Source: DE102010037150B4 [DE] Transparentes Verbundmaterial fuer Sicherheitsverglasung aus mindestens drei Schichten (1, 2, 3), umfassend eine Innenschicht (2) aus transparenten Polycarbonat und zwei Aussenschichten (1, 3), deren Material ausgewaehlt ist aus Glas oder transparenter Glaskeramik, wobei die beiden Aussenschichten gleiche Schichtdicken aufweisen, wobei die Summe der Schichtdicken (d) der beiden Aussenschichten (1, 3) kleiner als die Schichtdicke (D) der Innenschicht (2) ist, wobei eine Kunststoffschicht (4) zwischen die Innenschicht (2) und die Aussenschichten (1, 3) eingebracht ist und wobei die Kunststoffschicht (4) aus einer Polyurethan-Folie (PUR-Folie) mit einer Dicke (p) zwischen 0,1 und 1,4 mm besteht, dadurch gekennzeichnet, dass die Innenschicht (2) aus einer Polycarbonatplatte mit einer Dicke (D) zwischen 3 und 9 mm besteht und dass die Aussenschichten (1, 3) entweder aus einer thermisch oder chemisch v...

Classifications:

International (IPC 8-9): B32B17/10 B32B27/36

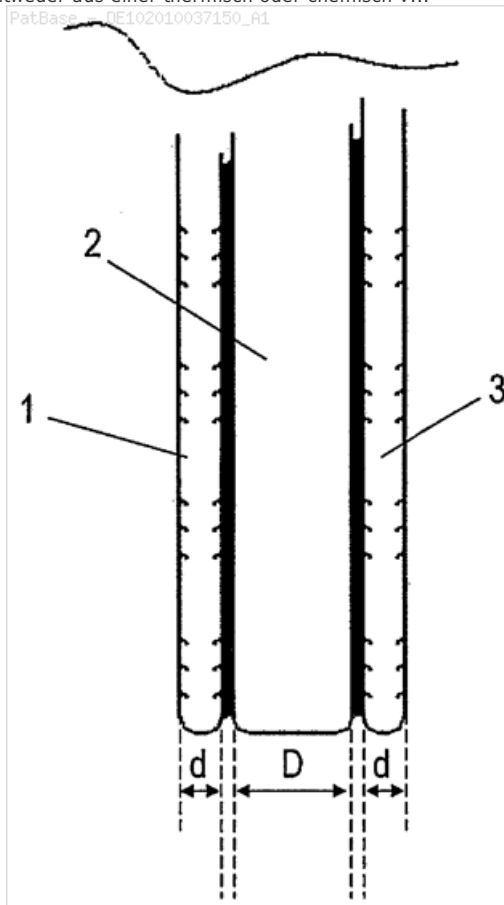
C03C27/12 (Advanced/Invention)

CPC: B32B17/10036 B32B17/10 B32B17/10119 B32B17/1077

B32B27/36 B32B2367/00

European: B32B17/10 B32B17/10C28 B32B17/10C4 B32B17/10G30

B32B27/36 L32B367/00



Family:

Publication number	Publication date	Application number	Application date
DE102010037150 A1	20120301	DE201010037150	20100825
DE102010037150 B4	20151217	DE201010037150	20100825

Priority:

DE201010037150 20100825

Probable Assignee: SCHOTT AG

Assignee(s): (std): SCHOTT AG

Inventor(s): (std): FIEDLER HANS JOACHIM ; FREITAG RUEDIGER ; PANZNER GERRIT

Title: LAMINATED AND ION-EXCHANGED STRENGTHENED GLASS LAMINATES

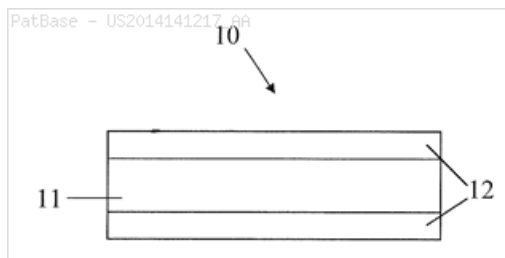
Abstract: A method of making a glass sheet (10) comprises laminating a high CTE core glass (11) to a low CTE clad glass (12) at high temperatures and allowing the laminate (10) to cool creating compressive stress in the clad glass (12), and then ion exchanging the laminate (10) to increase the compressive stress in the outer near surface regions of the clad glass (12). The core glass (11) may include ions that exchange with ion in the clad glass (12) to increase the compressive stress in inner surface regions of the clad glass (12) adjacent to the clad glass/core glass interfaces. The glass laminate (10) may be formed and laminated using a fusion forming and laminating process and fusion formable and ion exchangeable glass compositions.

Classifications:

International (IPC 8-9): B32B17/00 B32B17/06 C03B17/02 C03B17/06 C03B23/20 C03B27/03 C03B29/02 C03C21/00 C03C27/12 C03C3/085 C03C3/087 C03C3/091 C03C3/093 C03C4/18 (Advanced/Invention)

CPC: B32B17/06 C03C21/002 C03B17/025 C03C3/091 C03C3/093 C03B29/025 C03B17/064 Y10T428/24942 Y10T428/2933 C03C3/085 C03C3/087 C03C4/18 B32B2307/30 C03C2204/00 C03B17/02 C03B17/06 C03B23/20

US: 428/212 428/220 428/375 65/30.14



Family:

Publication number	Publication date	Application number	Application date
■ CN103702952 A	20140402	CN201280036592	20120720
■ CN103702952 B	20170825	CN201280036592	20120720
■ EP2736855 A1	20140604	EP20120741439	20120720
■ IN00116DN2014 A	20150522	IN2014DN00116	20140107
■ JP2014521582 A2	20140828	JP20140522897	20120720
■ JP2014521582 T2	20140828	JP20140522897T	20120720
■ JP6145894 B2	20170614	JP20140522897T	20120720
■ KR20140056291 A	20140509	KR20147004745	20120720
■ TW201304951 A	20130201	TW20120123090	20120627
■ TWI572480 B	20170301	TW20120123090	20120627
■ US2014141217 AA	20140522	US20120232425	20120720
■ US2017066674 AA	20170309	US20160354143	20161117
■ US9522836 BB	20161220	US20120232425	20120720
■ WO13016157 A1	20130131	WO2012US47515	20120720

Priority:

US20110511422P 20110725 US20120232425 20120720 WO2012US47515 20120720
US20140232425 20140113 US20160354143 20161117

Probable Assignee: CORNING INC

Assignee(s): (std): GALLAGHER MICHAEL T ; VENKATARAMAN NATESAN ; SCHAUT ROBERT ANTHONY ; KICZENSKI TIMOTHY J ; GULATI SURESH T ; GULATI SURESH THAKORDAS ; KICZENSKI TIMOTHY JAMES ; GALLAGHER MICHAEL THOMAS ; CORNING CO LTD ; CORNING INC

Assignee(s): FACEBOOK INC

Inventor(s): (std): GALLAGHER MICHAEL T ; GALLAGHER MICHAEL THOMAS ; GULATI SURESH T ; GULATI SURESH THAKORDAS ; KICZENSKI TIMOTHY J ; KICZENSKI TIMOTHY JAMES ; SCHAUT ROBERT ANTHONY ; VENKATARAMAN NATESAN

Agent(s): OLDROYD RICHARD DUNCAN; MICHAEL A; WATSON BRUCE P

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 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

Title: DELAMINATION RESISTANT PHARMACEUTICAL GLASS CONTAINERS CONTAINING ACTIVE PHARMACEUTICAL INGREDIENTS

Abstract: The present invention is based, at least in part, on the identification of a pharmaceutical container formed, at least in part, of a glass composition which exhibits a reduced propensity to delaminate, i.e., a reduced propensity to shed glass particulates. As a result, the presently claimed containers are particularly suited for storage of pharmaceutical compositions and, specifically, a pharmaceutical solution comprising a pharmaceutically active ingredient, for example, HUMIRA (Adalimumab).

Classifications:

International (IPC 8-9): A47G19/22 A61J1/00 A61J1/05 A61J1/06 A61J1/14 A61K31/403 A61K38/17 A61K38/18 A61K38/19 A61K38/28 A61K39/395 B22C9/10 B28B11/00 B28B21/00 B32B1/02 B32B17/00 B32B17/06 B32B7/02 B65D1/00 B65D1/02 B65D1/09 B65D1/40 B65D1/42 B65D23/02 B65D23/08 B65D25/00 B65D25/14 B65D25/34 B65D65/42 C03B23/207 C03B27/00 C03B27/03 C03B5/18 C03C15/00 C03C15/02 C03C17/00 C03C17/06 C03C17/22 C03C17/23 C03C17/245 C03C17/28 C03C17/30 C03C17/32 C03C17/34 C03C17/38 C03C17/42 C03C21/00 C03C23/00 C03C3/076 C03C3/078 C03C3/083 C03C3/085 C03C3/087 C03C3/089 C03C3/091 C03C3/14 C03C3/145 C03C4/00 C03C4/18 C03C4/20 C07K16/24 C08G73/10 C08L83/00 C09D179/08 F01D5/18 (Advanced/Invention); C03C21/00 (Advanced/Non-invention)

CPC: B65D1/0207 B65D25/34 B65D23/0814 B65D1/40 C03C17/00 C03C2204/00 C08G73/105 C08G73/1071 B65D65/42 A61K39/3955 C09D179/08 C03C4/18 A61K38/193 A61K38/17 Y10T428/1321 A61K38/1816 A61K38/28 A61K31/403 C07K16/241 C08K5/544 Y10T428/13 B65D1/09 C03C3/083 C03C3/085 C03C21/00 C08L77/02 C09D183/08 Y10T428/315 C03C15/02 A61J1/00 Y10T428/131 Y10T428/1317 Y10T428/26 Y10T428/24942 C03C4/20 C03C17/3405 B65D25/00 C03C3/087 C03C3/091 C03C17/28 C03B27/00 B65D1/42 B65D13/02 Y02A50/463 Y02A50/465 B65D85/84 H05K999/99 A61J1/1468 A61J1/065 B32B17/06 B65D1/0215 B65D23/02 B65D23/0821 B65D23/0835 B65D25/14 C03B27/0413 C03C17/005 C03C17/30 C03C17/32 C03C17/42 C03C21/002 C03C2217/78 C03C2218/111

US: 1/1 206/216 206/438 206/524.1 206/524.3 206/524.6 206/528 215/12.1 215/12.2 215/379 220/62.11 220/62.15 424/133.1 424/142.1 424/158.1 424/85.1 428/212 428/332 428/336 428/34.1 428/34.4 428/34.6 428/34.7 428/410 428/426 428/429 428/435 501/11 501/49 501/52 501/53 501/55 501/66 501/68 501/69 501/70 501/72 514/20.9 514/210.12 514/5.9 514/7.7 524/600 65/108 65/30.14 65/31

PatBase - US2013101596_AA

Patent Application Publication Apr. 25, 2013 Sheet 1 of 4 US 2013/0101596 A1

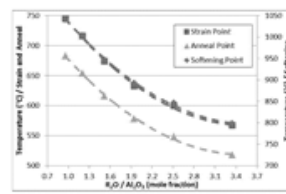


FIG. 1

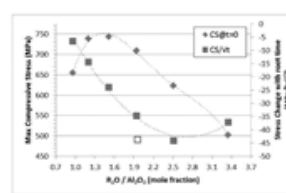


FIG. 2

Family:

Publication number	Publication date	Application number	Application date
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AU2012328780 BB	20150618	AU20120328780	20121025
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AU2013282411 BB	20160804	AU20130282411	20130628
AU2013282411 CA	20170209	AU20130282411	20130628
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AU2013352512 AA	20140605	AU20130352512	20131122
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AU2013352514 AH	20150611	AU20130352514	20131122
AU2013352514 BB	20170316	AU20130352514	20131122
AU2013352517 AA	20140605	AU20130352517	20131122
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Probable Assignee: CORNING INC

Assignee(s): (std): CHANG THERESA ; CORNING CO LTD ; DEMARTINO STEVEN EDWARD ; CORNING INC ; DANIELSON PAUL STEVEN ; DRAKE MELINDA ANN ; DANIELSON PAUL STEPHEN ; HAMILTON JAMES PATRICK ; FADEEV ANDREI GENNADYEVICH ; WEEKS WENDELL PORTER ; SCHAUT ROBERT ANTHONY ; PEANASKY JOHN STEPHEN ; MORENA ROBERT MICHAEL ; PAL SANTONA ; WEEKS WENDELL P ; SCHIEFELBEIN SUSAN LEE ; TIMMONS CHRISTOPHER LEE ; SAHA CHANDAN KUMAR ; VENKATARAMAN NATESAN ; VERKLEERAN RONALD LUCE ; VENKATARMAN NATESAN ; SICK SARA JEAN ; ADIB KAVEH ; BOOKBINDER DANA CRAIG ; CORNING INC

Assignee(s): CORNING INC CORNING ; BROOKBINDER DANA CRAIG ; VERKLEERAN RONALD LUCE ; KORNING INKORPOTETED ; CORNING INC1 RIVERFRONT PLAZACORNINGNY14831US

Inventor(s): (std): ANDREI GENNADYEVICH FADEEV ; BOOKBINDER DANA C ; BOOKBINDER DANA CRAIG ; BOOKBINDER DANA CRAG ; C L DEMONS ; CHANDAN KUMAR SAHA ; CHANG THERESA ; CHRISTOPHER LEE TIMMONS ; DANA CRAIG BOOKBINDER ; DANIELSON PAUL STEPHEN ; DANIELSON PAUL S ; DANIELSON PAUL STEPHEN ; DE MARTINO STEVEN EDWARD ; DEMARTINO E S ; DEMARTINO STEVEN E ; ADB KAVEH ; ADIB KAVEH ; DEMARTINO STEVEN EDWARD ; DRAKE MELINDA A ; DRAKE MELINDA ANN ; FADEEV ANDRE GENNADYEVICH ; FADEEV ANDREI G ; FADEEV ANDREI GENNADYEVICH ; HAMILTON JAMES P ; HAMILTON JAMES PATRICK ; HAMILTON JAMES PATRICK ; JAMES PATRICK HAMILTON ; JOHN STEPHEN PEANASKY ; KAVEH ADIB ; MELINDA ANN DRAKE ; MOLINARI R M ; MORENA ROBERT M ; MORENA ROBERT MICHAEL ; PARR S ; PAUL STEPHEN DANIELSON ; PEANASKY JOHN ; NATESAN VENKATARAMAN ; R A SAUTER ; ROBERT ANTHONY SCHAUT ; SCHIEFELBEIN SUSAN LEE ; SCHIEFELBEIN SUSAN L ; SCHIEFELBEIN SUSAN LEE ; SICK SARA JEAN ; STEVEN EDWARD DEMARTINO ; SUSAN LEE SCHIEFELBEIN ; T CHANG ; THERESA CHANG ; TIMMONS C L ; TIMMONS CHRISTOPHER ; TIMMONS CHRISTOPHER L ; TIMMONS CHRISTOPHER LEE ; ROBERT MICHAEL MORENA ; RONALD LUCE VERKLEERAN ; SAHA CHANDAN K ; SAHA CHANDAN KUMAR ; TIMMONS CHRISTOPHER LEE ; VENKATARAMAN NATESAN ; VENKATARMAN NATESAN ; VERKLEERAN RONALD LUCE ; VERKLEERAN RONALD LUCE ; WEEKS WENDELL PORTER ; SCHIEFELBEIN SYUZAN LI ; SCHAUT ROBERT ANTHONY ; SAHA CHANDAN KUMAR ; PEANASKY JOHN STEPHEN ; PEANASKY JOHN S ; PAL SANTONA ; MORLEY JAMIE LYNN ; MORENA ROBERT MICHAEL ; MORENA ROBERT MAJL ; KHEMILTON DZHEJMS PATRIK ; HOFF KYLE CHRISTOPHER ; DREJK MELINDA ENN ; DRAKE MELINDA ANN ; DANIELSON POL STEFEN ; DEMARTINO STEVEN EDWARD ; DANIELSON PAUL STEVEN ; DANIELSON I PAUL STEVEN ; BUKBINDER DANA KREJG ; BAYNE JOHN FREDERICK ; ADIB KAVEKH ; TIMMONS KRISTOFER LI ; SHOT ROBERT ENTONI ; PINASKI DZHON STEFEN ; FADEEV ANDREI GENNADYEVICH ; DEMARTINO STEVEN EDWARD ; CHANG TEREZA ; BUKBAJNDER DANA KREJG ; WECHLEEZEN R L ; WEEKS WENDELL P ; SANTONA PAL ; SCHAUT ROBERT A

Inventor(s): SCHAUT ROBERT ANTHONY PAINTED POST ; WEEKS WENDELL P CORNING ; WEEKS WENDELL PORTER CORNING ; BROOKBINDER DANA CRAIG ; PAL PEANASKY JOHN STEPHEN ; VERKLEREN RONALD LYUS ; SAHA CHANDAN KUMARUS ; TIMMONS CHRISTOPHER LEEUS ; ROBERT ANTHONYSCHAUT ; PAL SANTONA PAINTED POST ; PAL SANTONAUUS ; PEANASKY JOHN STEPHEN BIG FLATS ; PEANASKY JOHN STEPHENUS ; MORENA ROBERT MICHAEL LINDLEY ; FADEEV ANDREI GENNADYEVICHUS ; DRAKE MELINDA ANN CORNING ; AKE MELINDA ANN ; DEMARTINO STEVEN EDWARD PAINTED POST ; DEMARTINO STEVEN EDWARDUS ; DANIELSON PAUL STEPHEN DUNDEE ; CHANG THERESAUS ; BOOKBINDER DANA CRAIGUS

Agent(s): PHILLIPS ORMONDE FITZPATRICK; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; HERNANDEZ YORCK DIPL ING; GREENE SIMON KENNETH; OLDROYD RICHARD DUNCAN; KINGSBURY OLIVER WILLIAM; GUNNING JACK PETER; SCHEUERMANN ERIK; SCOTT MARK ANDREW; FAHMI ASSEGAF SH MH; LANNY SETIAWAN MBA MGMT MA LPC MA LMFT; OOO YURIDICHESKAYA GORODISSKIY I PARTNERY FA; SPRUSON AND FERGUSON ASIA PTE LTD; DINSMORE AND SHOHL LLP; MICHAEL G; DINSMORE AND SHOL LLP; SCHAEBERLE TIMOTHY M; BUTLER GREGORY B; INGLE CORY J ET AL; SPARKS JONATHAN M ET AL; TENT BRIAN A ET AL; TENT BRIAN A

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

Title: **LAMINATED** STRUCTURES AND METHODS OF MANUFACTURING **LAMINATED** STRUCTURES

Abstract: **Laminated** structures include a thin **glass** sheet with a **thickness** of less than 600 μm being attached to a metal sheet with an adhesive **layer** including a **thickness** of about 100 μm or less. These **laminated** structures can include planar or curved shapes. Methods of manufacturing a **laminated** structure are also provided including the step of attaching a **glass** sheet with a **thickness** of less than 600 μm to a metal sheet with an adhesive **layer** including a **thickness** of about 300 μm or less.

Classifications:

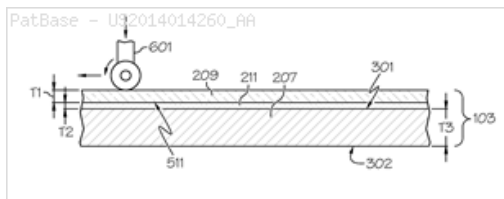
International (IPC 8-9): B32B15/04 B32B15/08 B32B15/18

B32B17/06 B32B17/10 B32B38/00 B32B7/02

C03C27/04 (Advanced/Invention)

CPC: B32B7/02 B32B38/0012 B32B15/08 B32B15/18 B32B17/061
B32B17/10 B32B17/10018 Y10T156/10 Y10T156/1028 Y10T156/1044
Y10T428/24967 B32B17/10119 B32B7/10

US: 156/212 156/222 156/60 428/215



Family:

Publication number	Publication date	Application number	Application date
■ CN104582952 A	20150429	CN201380037160	20130607
■ EP2872326 A1	20150520	EP20130731200	20130607
■ EP2872326 B1	20180523	EP20130731200	20130607
■ JP2015527946 A2	20150924	JP20150521620	20130607
■ JP2015527946 T2	20150924	JP20150521620T	20130607
■ JP2017081167 A2	20170518	JP20160232780	20161130
■ JP6054528 B2	20161227	JP20150521620T	20130607
■ KR20150036499 A	20150407	KR20157003491	20130607
■ US2014014260 AA	20140116	US20120547092	20120712
■ WO14011334 A1	20140116	WO2013US44627	20130607

Priority:

US20120547092 20120712 JP20150521620T 20130607 WO2013US44627 20130607
JP20160232780 20161130

Probable Assignee: CORNING INC

Assignee(s): (std): CHOWDHURY DIPAKBIN QASEM ; CORNING CO LTD ; CORNING INC ; FISHER WILLIAM KEITH ; MCDONALD MICHAEL AARON ; KANG KIAT CHYAI ; ZHANG CHUNHE

Inventor(s): (std): CHOWDHURY DIPAKBIN QASEM ; DIPAKBIN QASEM CHOWDHURY ; FISHER WILLIAM KEITH ; KANG KIAT CHYAI ; MCDONALD MICHAEL A ; MCDONALD MICHAEL AARON ; WILLIAM KEITH FISHER ; ZHANG CHUNHE

Agent(s): OLDROYD RICHARD DUNCAN; EPPING HERMANN FISCHER; HARDEE RYAN T

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

Title: METHODS FOR PRODUCING ION EXCHANGED GLASS AND RESULTING APPARATUS

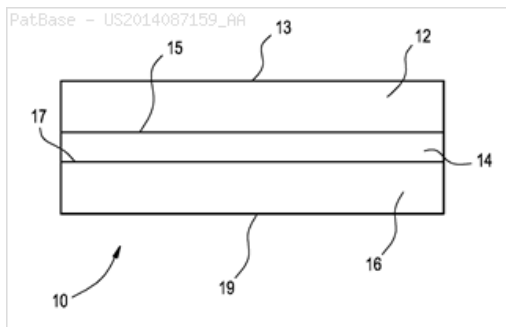
Abstract: A laminate structure having a first glass layer, a second glass layer, and at least one polymer interlayer intermediate the first and second glass layers. The first glass layer is comprised of a thin, chemically strengthened glass having a surface compressive stress of between about 250 MPa and about 350 MPa and a depth of layer (DOL) of compressive stress greater than about 60 micro m. The second glass layer can also be comprised of a thin, chemically strengthened glass having a surface compressive stress of between about 250 MPa and about 350 MPa and a depth of layer (DOL) of compressive stress greater than about 60 micro m.

Classifications:

International (IPC 8-9): B32B17/00 B32B17/10 B32B3/26 B32B7/02 C03C15/00 C03C21/00 C03C23/00 C03C27/10 C03C27/12 C03C3/085 C03C3/095 (Advanced/Invention)

CPC: B32B17/10743 B32B17/1077 B32B17/10788 B32B7/02 B32B2307/50 C03C3/085 C03C3/095 C03C27/10 Y10T428/2495 Y10T428/24967 Y10T428/24983 Y10T428/269 Y10T428/315 B32B17/10119 B32B17/10036 B32B17/10761 C03C15/00 B32B3/263 B32B2250/03 B32B2250/40 B32B2605/006 B32B2419/00 C03C21/002 B32B17/10137

US: 1/1 428/213 428/215 428/217 428/339 428/410 65/30.14



Family:

Publication number	Publication date	Application number	Application date
CN104812572 A	20150729	CN201380050054	20130923
CN105492205 A	20160413	CN201480046872	20140623
EP2900471 A1	20150805	EP20130771726	20130923
EP3013580 A1	20160504	EP20140740069	20140623
IN11660DN2015 A	20160513	IN2015DN11660	20151222
JP2015534536 T2	20151203	JP20150533246T	20130923
JP2016528139 T2	20160915	JP20160521881T	20140623
JP6080279 B2	20170215	JP20150533246T	20130923
KR20150060782 A	20150603	KR20157009904	20130923
KR20160024947 A	20160307	KR20167001806	20140623
US2014087159 AA	20140327	US20130926461	20130625
US2014087193 AA	20140327	US20120626958	20120926
US2016280591 AA	20160929	US20160178901	20160610
US9387651 BB	20160712	US20130926461	20130625
WO14052229 A1	20140403	WO2013US61164	20130923
WO14209861 A1	20141231	WO2014US43619	20140623

Priority:

US20120626958 20120926 US20130926461 20130625 WO2013US61164 20130923
WO2014US43619 20140623 US20160178901 20160610

Probable Assignee: CORNING INC

Assignee(s): (std): CITES JEFFREY SCOTT ; CLEARY THOMAS MICHAEL ; CORNING CO LTD ; CORNING INC ; COUILLARD JAMES GREGORY ; MOORE MICHAEL JOHN

Inventor(s): (std): CITES JEFFREY SCOTT ; CLEARY THOMAS MICHAEL ; COUILLARD JAMES GREGORY ; HUTEN TIMOTHY SCOTT ; JAIN ANURAG ; MARCELLUS BRENNIA ; MARCELLUS BRENNIA ELIZABETH ; MOORE MICHAEL JOHN

Agent(s): KINGSBURY OLIVER WILLIAM; SCHEUERMANN ERIK; PAYAL A; HARDEE RYAN T

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

Title: THIN GLASS/METAL LAMINATE WITH ANTI-GLARE SURFACE

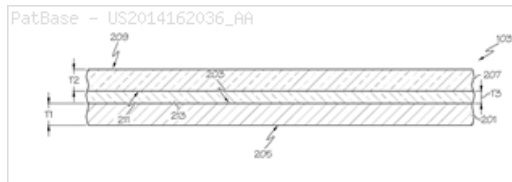
Abstract: Disclosed herein are laminated structures comprising a metal sheet including a first face and a second face with a thickness of from about 0.5 mm to about 2 mm extending between the first face and the second face. The laminated structure further includes a first chemically strengthened or non-chemically strengthened glass sheet including a thickness of less than or equal to about 2 mm and a first interlayer attaching the first glass sheet to the first face of the metal sheet. Also disclosed herein are methods of manufacturing a laminated structure comprising the steps of laminating a metal sheet and a first glass sheet together with an interlayer.

Classifications:

International (IPC 8-9): B32B15/04 B32B15/098 B32B17/06 B32B17/10 B32B37/10 B32B7/02 B32B7/12 C03C15/00 C03C21/00 C03C27/10 C03C27/12 (Advanced/Invention)

CPC: B32B17/10036 C03C15/00 C03C21/00 Y10T156/10 Y10T428/24967 B32B17/10743 B32B15/04 B32B17/10 B32B7/02 B32B15/098 B32B7/12 B32B17/10018 B32B37/1018 B32B2307/584 B32B2307/558 B32B2307/546 B32B2311/30 B32B2311/24 B32B2419/00 B32B17/10137 B32B17/061 B32B17/10761 Y10T156/1084

US: 156/153 156/269 156/272.2 156/285 156/60 216/24 216/33 428/215



Family:

Publication number	Publication date	Application number	Application date
■ CN105102217 A	20151125	CN201380063463	20131002
■ EP2903820 A1	20150812	EP20130776675	20131002
■ JP2015535763 T2	20151217	JP20150535749T	20131002
■ JP2018039726 A2	20180315	JP20170198254	20171012
■ JP6228217 B2	20171108	JP20150535749T	20131002
■ KR20150064192 A	20150610	KR20157011710	20131002
■ US2014162036 AA	20140612	US20140183135	20140218
■ US2015246507 AA	20150903	US20130432799	20131002
■ WO14055583 A1	20140410	WO2013US62956	20131002

Priority:

US20120710287P 20121005 JP20150535749T 20131002 WO2013US62956 20131002
US20130432799 20131002 US20140183135 20140218

Probable Assignee: CORNING INC

Assignee(s): (std): BROWN GORDON CHARLES ; CITES JEFFREY SCOTT ; CORNING CO LTD ; CORNING INC ; ZHANG CHUNHE ; FRISKE MARK STEPHEN ; FISHER WILLIAM KEITH

Inventor(s): (std): MARCELLUS BRENNAN ELIZABETH ; RICKERL PAUL GEORGE ; XUN MAY YANMEI ; ZHANG CHUNHE ; FRISKE MARK STEPHEN ; FISHER WILLIAM KEITH ; CITES JEFFREY SCOTT ; BROWN GORDON CHARLES

Agent(s): KINGSBURY OLIVER WILLIAM; HARDEE RYAN T

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

Title: COMPOSITE ELEMENT AND USE THEREOF

Abstract: A lightweight composite panel is provided that includes at least one mineral **glass** or **glass**-ceramic panel and at least one organic **layer**. The weight per unit area of the lightweight composite panel is in the range from 0.5 k grams per square metre to 5.5 k grams per square metre, the ratio of the total **thickness** of the one or more mineral **glass** or **glass**-ceramic panels to the total **thickness** of all of the organic **layers** is from 1:0.01 to 1:1 and the total **thickness** of all of the organic **layers** is less than or equal to 350 micro m. The lightweight composite panel complies with the thermal safety requirements of the air travel authorities and its "Total Heat Release," measured in accordance with JAR/FAR/CS 25, App. F, Part IV and AITM 2.0006, is less than 65 kWxmin/m2 and its flame time after removal of the flame in the "Vertical Bunsen Burner Test", measured in accordance with FAR/JAR/CS 25, App. F, Part 1 and AITM 2.0002A, is less than 15 s.

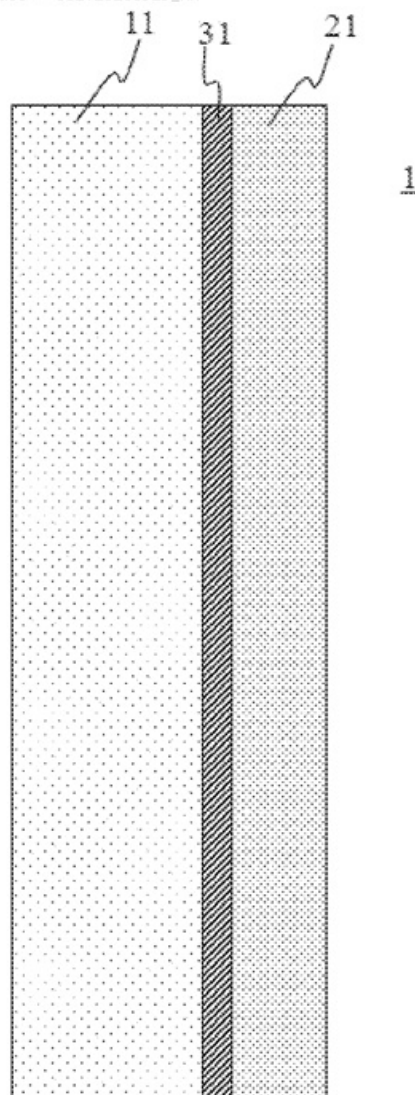
Classifications:

International (IPC 8-9): B29C65/00 B32B17/06 B32B17/10 B32B37/10 B32B37/16 B32B38/10 B32B7/12 B60J1/00 B64C1/14 C03C17/28 C03C27/12 E04B2/74 (Advanced/Invention)

CPC: B32B17/064 B32B17/10018 B32B17/10119 B32B17/10862 B32B17/10935 B64C1/1484 C03C3/083 C03C3/091 C03C21/002 C03C27/10 B32B7/12 B32B17/10779 B32B17/10137 B32B17/10816 B32B37/1018 B32B37/10 B32B37/16 B32B38/10 B29C66/45 B29C66/7465 B29C66/0224 B32B2255/26 B32B2307/412 B32B2307/54 B32B2307/542 B32B2307/536 B32B2307/3065 B32B2419/00 B32B2605/18 B32B2309/02 B32B2315/08 B29L2031/778 B32B2367/00 B32B2375/00 B32B2383/00 B32B17/1077 B32B17/10036 B32B17/10798

US: 156/249 428/213

PatBase - US2016136929_AA



Family:

Publication number	Publication date	Application number	Application date
BR112016001571 A2	20170725	BR20161101571	20140711
CA2919071 AA	20160122	CA20142919071	20140711
CN105408107 A	20160316	CN201480041938	20140711
DE102013214422 A1	20150129	DE201310214422	20130724
DE112014003401 A5	20160519	DE201411003401T	20140711
JP2016531067 T2	20161006	JP20160528401T	20140711
US2016136929 AA	20160519	US20160006196	20160126
WO15010922 A1	20150129	WO2014EP64887	20140711

Priority:

DE201310214422 20130724 WO2014EP64887 20140711

Probable Assignee: SCHOTT AG

Assignee(s): (std): SCHOTT AG

Assignee(s): OTTERMANN CLEMENS ; LIEBALD RAINER ; ORTNER ANDREAS ; MEISS JENS ; ESEMANN HAUKE ; FECHNER JOERG HINRICH ; HEISS CHOUQUET MARKUS ; KUREK KLAUS PETER

Inventor(s): (std): OTTERMANN CLEMENS ; ORTNER ANDREAS ; MEISS JENS ; LIEBALD RAINER ; KUREK KLAUS PETER ; HEISS MARKUS ; FECHNER JOERG HINRICH ; ESEMANN HAUKE ; HEISS CHOUQUET MARKUS

Inventor(s): JENS MEISS ; JOERG HINRICH FECHNER ; KLAUS PETERKUREK ; MARKUS HEISS CHOUQUET ; RAINER LIEBALD ; ANDREAS ORTNER ; CLEMENS OTTERMANN ; HAUKE ESEMANN

Agent(s): MARKS AND CLERK

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 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

Title: SCRATCH-RESISTANT BOROALUMINOSILICATE GLASS

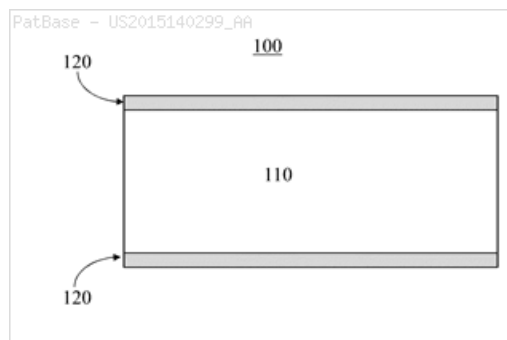
Abstract: Ion exchangeable boroaluminosilicate glasses having high levels of intrinsic scratch resistance are provided. The glasses include the network formers SiO₂, B₂O₃, and Al₂O₃, and at least one of Li₂O, Na₂O, and K₂O. When ion exchanged these glasses may have a Knoop scratch initiation threshold of at least about 40 Newtons (N). These glasses may also be used to form a clad layer for a glass laminate in which the core layer has a coefficient of thermal expansion that is greater than that of the clad glass.

Classifications:

International (IPC 8-9): B32B17/00 B32B37/00 B32B7/02
C03B17/06 C03B19/00 C03B23/203 C03C21/00 C03C3/091
C03C3/093 (Advanced/Invention)

CPC: B32B17/00 C03B17/064 B32B7/02 B32B2250/03 B32B2307/30
B32B2307/584 C03C3/093 Y10T428/24942 C03C21/002 C03C3/091
B32B17/06

US: 428/212 501/66 65/53



Family:

Publication number	Publication date	Application number	Application date
■ CN106414358 A	20170215	CN201480073697	20141113
■ EP3071531 A1	20160928	EP20140816465	20141113
■ JP2016537289 T2	20161201	JP20160533120T	20141113
■ KR20160087867 A	20160722	KR20167016133	20141113
■ TW201527250 A	20150716	TW20140140270	20141120
■ US2015140299 AA	20150521	US20140542932	20141117
■ WO15077109 A1	20150528	WO2014US65343	20141113

Priority:

US20130906666P 20131120 WO2014US65343 20141113 US20140542932 20141117

Probable Assignee: CORNING INC

Assignee(s): (std): CORNING CO LTD ; CORNING INC

Inventor(s): (std): ELLISON ADAM JAMES ; MAURO JOHN CHRISTOPHER ; NONI JR DOUGLAS MILES ; THIRION LYNN MARIE ; VENKATARAMAN NATESAN

Agent(s): SCHEUERMANN ERIK; SANTANDREA ROBERT P

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

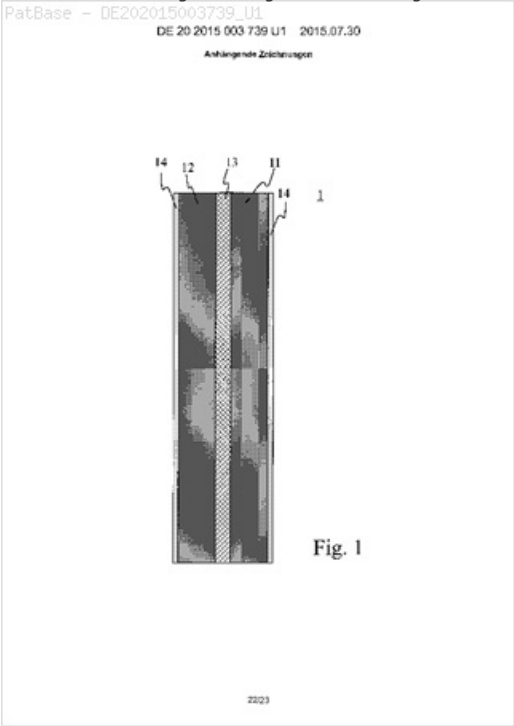
Title: VERBUNDSCHEIBE FUER SCHUTZVERGLASUNG MIT FUNKTIONSBESCHICHTUNG

Abstract: Source: DE202015003739U1 [DE] Verbundscheibe fuer eine Schutzverglasung, bevorzugt eine Bild-, Vitrinen-, oder Schaufenster erglasung, umfassend eine erste und eine zweite mineralische Glasscheibe und zumindest eine organische UV-absorbierende Schicht A, welche zwischen der ersten und der zweiten mineralische Glasscheibe angeordnet ist dadurch gekennzeichnet, dass das Flaechengewicht der Verbundscheibe eine untere Grenze von 0,6 k grams per square metre und eine obere Grenze von 7,5 k grams per square metre aufweist, der Quotient aus der Gesamtdicke aller organischen Schichten zu der Gesamtdicke der ersten und zweiten mineralischen Glasscheibe 0,1 bis 31 betraegt, die Gesamtdicke aller organischen Schichten kleiner gleich 3,1 mm betraegt, die Verbundscheibe eine antireflektierende Beschichtung, insbesondere eine interferenzoptische Beschichtung aufweist, die Verbundscheibe eine Beschichtung und/oder Folie umfasst, die eine Filterwirkung und/oder Absorption fuer elektromagnetische Strahlung im Wellenlaengenbereich kleiner 380 nm aufweist und die UV-Durchlaessigkeit der Verbundscheibe bei einer Wellenlaenge von 300 bis 380 nm bevorzugt kleiner gleich 3 percent betraegt und der allgemeine Farbwiedergabeindex Ra r Verbundscheibe groesser gleich 98 betraegt.

Classifications:

International (IPC 8-9): C03C27/12 (Advanced/Invention)

CPC: B32B17/10678 B32B17/10036 B32B17/10201



Family:

Publication number	Publication date	Application number	Application date
CH710243 A2	20160415	CH20150001348	20150917
DE102015006644 A1	20160407	DE201510006644	20150522
DE202015003739 U1	20150730	DE201520003739U	20150522
FR3026736 A1	20160408	FR20150058953	20150922

Priority:

DE201410219901 20141001 DE201510006644 20150522 DE201520003739U 20150522

Probable Assignee: SCHOTT AG

Assignee(s): (std): SCHOTT AG

Inventor(s): (std): ARNE LANGE ; CARSTEN RENZ ; HUBER REINHOLD ; LANGE ARNE ; REINHOLD HUBER ; RENZ CARSTEN

Agent(s): CABINET PLASSERAUD

Title: COMPOSITE GLASS WITH THIN INNER PANE

Abstract: A vehicle composite glass for separating a vehicle interior from an external environment is presented. The vehicle composite glass has a stack configuration that includes an inner pane made of glass, and outer pane made of glass, and a thermoplastic intermediate layer placed between the two panes bonding the inner pane to the outer pane. In one case, the thickness of the inner pane is 0.1 mm to 0.4 mm and the thickness of the outer pane is 1.0 mm to 1.8 mm.

Classifications:

International (IPC 8-9): B32B17/10 B32B27/30 B32B7/10 B60J1/00 B60J3/00 C03C21/00 C03C27/12 C03C3/085

C08F1/00 (Advanced/Invention);

B32B17/10 (Core/Invention)

CPC: B32B17/1077 B32B17/10788 B32B27/306 C03C3/085

B32B2315/08 B32B2605/08 B60J3/007 B60J1/00 B32B2605/006

B32B17/10036 B32B17/10119 B32B17/10137 B32B17/10174

B32B17/10761

US: 428/215



Family:

Publication number	Publication date	Application number	Application date
BR112016022689 A2	20170815	BR20161122689	20150309
CA2944082 AA	20160927	CA20152944082	20150309
CN106458743 A	20170222	CN201580019621	20150309
EA201692058 A1	20170228	EA20160092058	20150309
EP3131753 A1	20170222	EP20150709461	20150309
ID201707654 A	20170721	ID2016P0006886	20150309
IN201637033749 A	20170310	IN201637033749	20161003
JP2017518246 T2	20170706	JP20160562849T	20150309
KR20160135280 A	20161125	KR20167028631	20150309
MX2016013450 A1	20170118	MX20160013450	20150309
TH167483 A	20170907	TH20161006196	20150309
US2017113520 AA	20170427	US20150301856	20150309
WO15158464 A1	20151022	WO2015EP54810	20150309

Priority:

EP20140164731 20140415 WO2015EP54810 20150309

Probable Assignee: SAINT GOBAIN GLASS FRANCE

Assignee(s): (std): SAINT GOBAIN ; SAINT GOBAIN GLASS FRANCE ; SAINT GOBAIN SA

Assignee(s): KETTNER DOROTHEA ; KREMERS STEPHAN ; UEBELACKER STEFAN ; SIENERTH SANDRA

Inventor(s): (std): DOROTHEA KETTNER ; KETTNER DOROTHEA ; KREMERS STEPHAN ; SANDRA SIENERTH ; SIENERTH SANDRA ; STEFAN UEBELACKER ; STEPHAN KREMERS ; UEBELACKER STEFAN

Agent(s): GOUDREAU GAGE DUBUC ; GEBAUER DIETER EDMUND ; DR TOETI HERATY NROOSSENO ; MORITA HIROSHI ; LENDVAI TOMAS

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

Title: THERMALLY **TEMPERED GLASS** AND METHODS AND APPARATUSES FOR THERMAL **TEMPERING** OF **GLASS**

Abstract: A strengthened **glass** sheet product as well as process and an apparatus for making the product. The process comprises cooling the **glass** sheet by non-contact thermal conduction for sufficiently long to fix a surface compression and central tension of the sheet. The process results in thermally strengthened **glass** sheets having improved breakage properties.

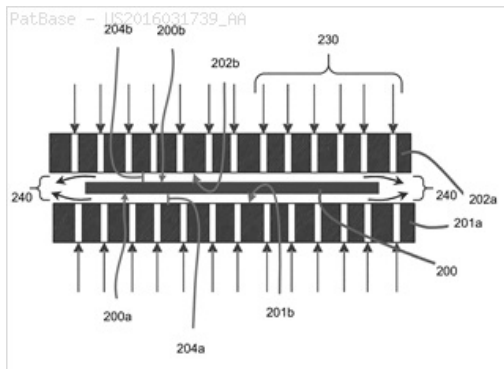
Classifications:

International (ipc 8-9): B32B17/10 C03B27/012 C03B27/016 C03B27/04 C03B27/044 C03B27/048 C03B27/052 C03B29/12 C03B29/16 C03B35/14 C03B35/24 C03C21/00 C03C23/00 C03C3/11 E04C2/54 E06B3/54 E06B3/66 E06B3/663 E06B3/67 G06F3/01 G06F3/041 (Advanced/Invention)

International (ipc 1-7): C03B27/04 C03B27/048 C03B27/052 C03B29/12 C03B29/16 C03B35/24 C03C3/11

CPC: C03B27/0413 C03B27/048 C03B27/044 C03B27/04 C03C21/002 C03B27/052 C03B29/12 C03B29/16 C03B35/24 C03C3/11 C03B27/012 C03B27/0404 C03B27/016 C03B27/0526 Y10T428/315 C03C23/007 E06B3/6715 G06F3/041 C03B27/0445 C03B27/0447 C03B35/147 B32B17/06 B32B17/10055 B32B17/10137 B32B17/10743 B32B17/10761 B32B17/1077 B32B17/10788 Y02P40/57 E06B3/66304 G06F3/016 B32B17/10302 E04C2/54 E06B3/6612 E06B3/66309 B32B17/10036 B32B17/10091 B32B17/101 B32B17/10752 C03C21/00 B32B2315/08 B32B2605/00 C03C3/078 C03C3/083 C03C3/085 C03C3/087 C03C3/095 E06B3/5409 E06B3/5436 H05K999/99

US: 1/1 428/141 428/156 428/220 428/410 428/426 65/114 65/115 65/157 65/32.1 65/348 65/349



Family:

Publication number	Publication date	Application number	Application date
AU2015296243 AA	20160204	AU20150296243	20150730
BR112017002106 A2	20171121	BR20171102106	20150730
CA2956929 AA	20170131	CA20152956929	20150730
CA2994236 AA	20180130	CA20162994236	20160728
CA2994284 AA	20180130	CA20162994284	20160801
CN106795036 A	20170531	CN201580053189	20150730
CN108025939 A	20180511	CN201680053655	20160728
EP3174835 A1	20170607	EP20150757030	20150730
EP3328803 A1	20180606	EP20160754030	20160728
EP3328807 A1	20180606	EP20160751079	20160728
EP3329348 A1	20180606	EP20160751081	20160728
IN201717004717 A	20170505	IN201717004717	20170209
IN201817003418 A	20180511	IN201817003418	20180130
IN201817004962 A	20180511	IN201817004962	20180209
JP2017523114 T2	20170817	JP20170505499T	20150730
KR20170036091 A	20170331	KR20177005630	20150730
KR20180033294 A	20180402	KR20187005874	20160801
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KR20180035862 A	20180406	KR20187005875	20160728
KR20180036746 A	20180409	KR20187005865	20160728
MX2017001386 A1	20170821	MX20170001386	20150730
TW201623168 A	20160701	TW20150124988	20150731
TW201623169 A	20160701	TW20150124991	20150731
US2016031739 AA	20160204	US20150814232	20150730
US2016031740 AA	20160204	US20150814274	20150730
US2016031741 AA	20160204	US20150814293	20150730
US2016031742 AA	20160204	US20150814319	20150730
US2016031743 AA	20160204	US20150814335	20150730
US2016031744 AA	20160204	US20150814363	20150730
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US2016031753 AA	20160204	US20150814303	20150730
US2016207821 AA	20160721	US20160082872	20160328
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US9802853 BB	20171031	US20150814293	20150730
US9975801 BB	20180522	US20150814319	20150730
WO16019167 A1	20160204	WO2015US42955	20150730
WO16019171 A1	20160204	WO2015US42965	20150730
WO17019837 A1	20170202	WO2016US44401	20160728
WO17019840 A1	20170202	WO2016US44406	20160728
WO17019851 A1	20170202	WO2016US44445	20160728
WO17020040 A2	20170202	WO2016US45022	20160801
WO17020040 A3	20170309	WO2016US45022	20160801
WO17020041 A1	20170202	WO2016US45025	20160801

Priority:

US20140031856P	20140731	US20140074838P	20141104	US20150147289P	20150414
US20150814181	20150730	US20150814232	20150730	US20150814274	20150730
US20150814293	20150730	US20150814319	20150730	US20150814335	20150730
US20150814363	20150730	US20150814303	20150730	WO2015US42955	20150730
US20150236296P	20151002	US20150236296P	20151002	US20160286192P	20160122
US20160281971P	20160122	US20160288851P	20160129	US20160288669P	20160129
US20160288755P	20160129	US20160082872	20160328	WO2016US44401	20160728

Probable Assignee: CORNING INC

Assignee(s): (std): CORNING CO LTD ; CORNING INC

Assignee(s): LEZZI PETER JOSEPH ; WASSON KEVIN LEE ; MASCHMEYER RICHARD ORR ; THOMAS JOHN CHRISTOPHER

Inventor(s): (std): JOHN CHRISTOPHER THOMAS ; KEVIN LEE WASSON ; LEZZI PETER JOSEPH ; MASCHMEYER RICHARD ORR ; PETER JOSEPH LEZZI ; RICHARD ORR MASCHMEYER ; WASSON KEVIN LEE ; THOMAS JOHN CHRISTOPHER

Agent(s): PHILLIPS ORMONDE FITZPATRICK; GOWLING WLG CANADA LLP; SCOTT MARK ANDREW; GREGORY V; BEAN GREGORY V; MAGAZINER RUSSELL S; WEGMANN ZACHARY J ET AL; WEGMANN ZACHARY J; PATEL PAYAL A

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

Title: MOBILE TERMINAL

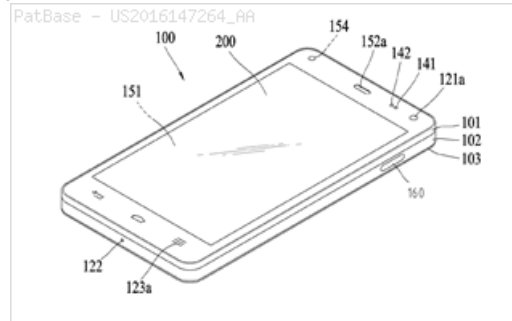
Abstract: There is disclosed a mobile terminal including a frame comprising a front surface in which a display unit is loaded, a window disposed on a front surface of the display unit; and a front case configured to cover a predetermined area of the window, wherein the window includes a first window **layer** comprising a front surface exposed outside, a second window **layer** larger than the first window **layer**, and comprising a first area of a front surface disposed to face a rear surface of the first window **layer** and a rear surface facing a front surface of the display unit, and an optical clear adhesive (OCA) provided between the first window **layer** and the second window **layer**, and the front case covers a second area arranged around the first area of a front surface of the second window **layer**, to maintain transparency of a window arranged in a front surface thereof, with an improved rigidity, and to reduce damage to the window.

Classifications:

International (IPC 8-9): G04G17/08 G04G9/06 G06F1/16 G06F3/041
H04M1/02 (Advanced/Invention)

CPC: H04M1/0202 G04G9/06 G04G17/08 G06F1/1626 G06F1/163
G06F1/1643 G06F1/1684 H04M1/0266

US: 345/173



Family:

Publication number	Publication date	Application number	Application date
■ KR101600493 B1	20160307	KR20150079290	20150604
■ KR101651136 B1	20160825	KR20140164443	20141124
■ KR20160061712 A	20160601	KR20140164443	20141124
■ US2016147264 AA	20160526	US20150841785	20150901
■ WO16085089 A1	20160602	WO2015KR08194	20150805

Priority:

KR20140164443 20141124 KR20150079290 20150604

Probable Assignee: LG ELECTRONICS INC

Assignee(s): (std): LG ELECTRONICS INC

Inventor(s): (std): CHAE HAN SEOK ; CHAE HANSEOK ; CHO SO HEON ; CHO SOHEON ; JUNG YUN TAEK ; JUNG YUNTAEK ; KANG WOO SUN ; KANG WOOSUN ; KIL MIN JUNG ; KIL MINJUNG ; LEE HO SANG ; LEE HOSANG ; LEE SEONG CHEOL ; LEE SEONGCHEOL ; SHIN SEONG YONG ; SHIN SEONGYONG ; SHIN SUNGYONG

Agent(s): KIM YONG IN ET AL

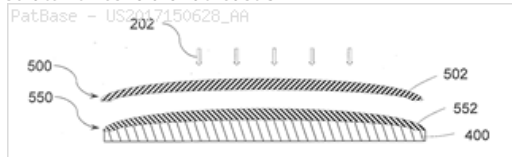
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IE IL IN IR IS IT JP KE KG KM KN KP KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR
MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI
SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UB UG UZ VC VN ZA ZM ZW

Title: DISPLAY SCREEN PROTECTOR

Abstract: Disclosed are device display screen protectors comprising a first strengthened substrate sized to cover a display screen of an electronic device, the first strengthened substrate having a central tension value in the range greater than 0 MPa and less than 20 MPa, a surface having a Knoop lateral cracking scratch threshold of at least 3 N.

Classifications:

International (IPC 8-9): B32B17/06 B32B7/12 C03C21/00
C03C23/00 C03C3/093 H05K5/00 H05K5/03 (Advanced/Invention)
CPC: H05K5/03 B32B7/12 B32B17/06 C03C21/002 C03C3/093
H05K5/0017 B32B2307/584 B32B2457/20 C03C21/005 C03C23/007
B32B17/10036 B32B17/10091 B32B17/10119 B32B17/10137
B32B17/10743 B32B17/10761 B32B17/1077 B32B17/10788
B32B17/10798



Family:

Publication number	Publication date	Application number	Application date
■ TW201728446 A	20170816	TW20160137157	20161115
■ US2017150628 AA	20170525	US20160353333	20161116
■ US2018014420 AA	20180111	US20170711379	20170921
■ US9801297 BB	20171024	US20160353333	20161116
■ WO17087432 A1	20170526	WO2016US62128	20161116

Priority:

US20150257449P 20151119 US20160319884P 20160408 US20160350969P 20160616
US20160353333 20161116 US20170711379 20170921

Probable Assignee: CORNING INC

Assignee(s): (std): CORNING INC

Inventor(s): (std): AMIN JAYMIN ; JACOBS JOSHUA MICHAEL ; PESANSKY JONATHAN DAVID ; SUBRAMANIAN ANANTHANARAYANAN ; REIMAN KEVIN BARRY

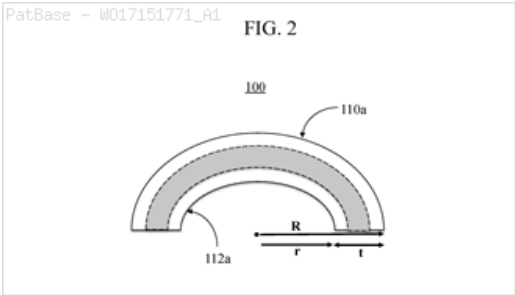
Agent(s): JOHN T; HARAN JOHN T

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 JP KE KG 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

Title: ION-EXCHANGEABLE GLASS WITH HIGH SURFACE COMPRESSIVE STRESS

Abstract: A glass article comprising an alkali aluminosilicate glass that is formable by down-draw processes for example slot- and fusion-draw to thicknesses of 125 micrometres or less and is capable of being chemically strengthened by ion-exchange to achieve a compressive stress at its surface of at least 950 MPa, in some embodiments at least about 1000 MPa, and in other embodiments at least about 1100 MPa. The high surface compressive stress allows the glass to retain net compression and thus contain surface flaws when the glass is subjected to bending around a tight radius. The glass may be used in foldable display applications.

Classifications:
International (IPC 8-9): C03B17/06 C03C21/00 C03C3/085 G09F9/00 (Advanced/Invention)
CPC: C03C3/085 C03C21/002



Family:

Publication number	Publication date	Application number	Application date
■ TW201800352 A	20180101	TW20170106927	20170303
■ WO17151771 A1	20170908	WO2017US20204	20170301

Priority:

US20160303671P 20160304

Probable Assignee: CORNING INC

Assignee(s): (std): CORNING INC

Inventor(s): (std): GROSS TIMOTHY MICHAEL ; MAURO JOHN CHRISTOPHER

Agent(s): SCHMIDT JEFFREY A

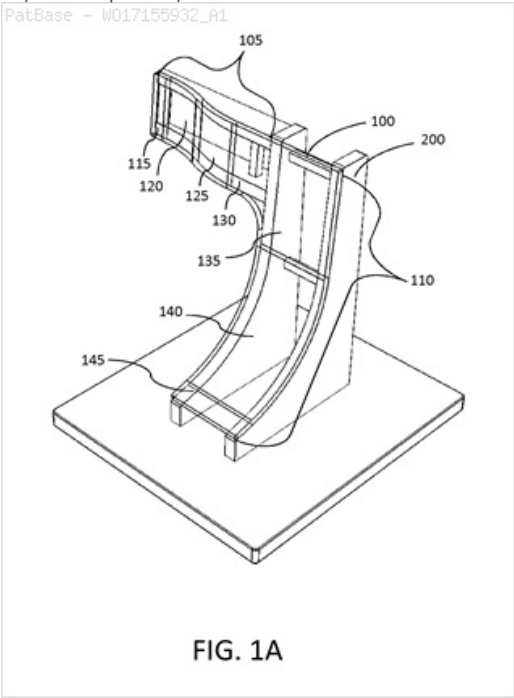
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR 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

Title: COLD FORMING OF COMPLEXLY CURVED GLASS ARTICLES

Abstract: The principles and embodiments of the present disclosure relate generally to complexly curved glass articles and methods of cold forming complexly curved glass articles, such as complexly curved glass articles having a first bend region with a set of first bend line segments, and a second bend region with a set of second bend line segments, wherein the first bend line segments and the second bend line segments are independent, are not parallel, and do not intersect.

Classifications:

International (IPC 8-9): C03B11/00 C03B23/02 C03B23/023 C03B23/03 C03B23/031 C03B23/033 C03B23/035 C03C4/00 (Advanced/Invention)
CPC: C03B23/0302 C03B23/023 C03B23/03 C03B23/031 C03B23/033 C03B23/0357



Family:

Publication number	Publication date	Application number	Application date
TW201739703 A	20171116	TW20170107757	20170309
WO17155932 A1	20170914	WO2017US21069	20170307

Priority:

US20160305795P 20160309 US20160328165P 20160427

Probable Assignee: CORNING INC

Assignee(s): (std): CORNING INC

Inventor(s): (std): COUILLARD JAMES GREGORY ; KUMAR ATUL ; SUN YAWEI ; WEEKS WENDELL PORTER

Agent(s): PATEL PAYAL A

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 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