

[SS 18] 16 and (frame or rim or bord+)

Results in EPODOC 274

[SS 19] 18 and (vehicle or windshield or window or automobile)

Results in EPODOC 61

[SS 20] 19 and (film or laminate)

Results in EPODOC 10

[SS 21] ..li



1/10 © EPODOC / EPO

PN - [CN107054016](#) A 20170818
PR - US201514969972 20151215
AP - CN201611153112 20161214
DT - I
CCI - [B32B17/064](#) ; [B32B27/304](#) ; [B32B27/40](#) ; [B32B3/08](#) ; [B60J1/00](#)
CUI - [B60J3/007](#)
CQI - [B32B17/10293](#) ; [B32B17/10348](#)
CNOI - [B32B17/064](#) ; [B32B27/304](#) ; [B32B27/40](#) ; [B32B33/00](#) ; [B32B3/08](#) ; [B60J1/00](#)
CCA - [B32B2605/00](#) ; [B32B2605/08](#)
CNOA - [B32B2605/08](#)
PA - FORD GLOBAL TECH LLC
TI - IMPROVED AUTOMOTIVE GLASS BLACKOUT AREA
AB - An automotive glass for a **vehicle** is provided by a **glass** panel including an exterior **layer** defining a non-ceramic UV-blocking band on an edge of the glass panel. In an embodiment, the exterior **layer** is a **polymer film** sheet sized to match a size dimension of the glass panel. The polymer **film** sheet may include a tinted portion **bordering** a substantially transparent interior. In another embodiment, the exterior layer is a non-ceramic paint applied to a **border** of the glass panel.

2/10 © EPODOC / EPO

PN - [US2017165944](#) A1 20170615
PR - US201514969972 20151215
AP - US201514969972 20151215
DT - **
CT - || R141 (A1)
[US2010098917](#) A1 20100422 [] (LYON MICHAEL [GB]);
[US2017342282](#) A1 20171130 [] (TORFS RITA [BE], et al);

[US4528232](#) A 19850709 [] (CLIFFE NICHOLAS R [GB]);
[US2009181242](#) A1 20090716 [] (ENNISS JAMES P [US], et al)

- CCI - [B32B17/064](#) ; [B32B27/304](#) ; [B32B27/40](#) ; [B32B3/08](#) ; [B60J1/00](#)
CUI - [B60J3/007](#)
CQI - [B32B17/10293](#) ; [B32B17/10348](#)
CCA - [B32B2605/00](#) ; [B32B2605/08](#)
PA - FORD GLOBAL TECHNOLOGIES LLC [US]
TI - AUTOMOTIVE GLASS BLACKOUT AREA
AB - An automotive glass for a **vehicle** is provided by a **glass** panel including an exterior **layer** defining a non-ceramic UV-blocking band on an edge of the glass panel. In an embodiment, the exterior **layer** is a **polymer film** sheet sized to match a size dimension of the glass panel. The polymer **film** sheet may include a tinted portion **bordering** a substantially transparent interior. In another embodiment, the exterior layer is a non-ceramic paint applied to a **border** of the glass panel.

3/10 © EPODOC / EPO

- PN - [CN205918309U](#) U 20170201
PR - CN20162796963U 20160719
AP - CN20162796963U 20160719
DT - I
PA - DALIAN HUAGONG INNOVATION TECHNOLOGY CO LTD
TI - Improve glass door and **window** thermal insulation performance's structure
AB - The utility model discloses an improve glass door and **window** thermal insulation performance's structure for reform transform old building single glass door and **window**, curtain. Glass door and **window** after the improvement includes existing individual **layer glass A**, door and **window frame**, sealed glue, and the glass who has the adhesive tape sets up bonding indoor one side at individual **layer glass A**, the **glass** who has the adhesive tape includes individual **layer glass B** and bonds the setting in the peripheral thermal -insulated adhesive tape of individual **layer glass B**, **plastic film** along the surface paste of thermal -insulated adhesive tape above that, have the **glass** and the individual **layer glass A** appearance phase -match of adhesive tape, be less than the door and **window frame** and install inside it, the peripheral gap H that reserves, during the construction, take plastic **film** off, glass that thermal -insulated adhesive tape will have an adhesive tape with individual **layer glass A** the bonding be in the same place, scribble along gap H and scrape sealed glue. The utility model discloses an automatic batch production, the quality guarantees easily, and is efficient for transforming old individual layer heat -insulating door or **window** and curtain, thermal -insulated, the effect that gives sound insulation of promotion glass door and **window** or glass curtain have realized the glass who has the adhesive tape .

4/10 © EPODOC / EPO

- PN - [CN106088959](#) A 20161109
PR - CN20161595637 20160719
AP - CN20161595637 20160719
DT - I

CT	- STSE (A) US5260112 A 19931109 [A] (GRETHER PAUL W [SE], et al) [A] 1-10 * 全文 *; US5657590 A 19970819 [A] (DIGMAN RODNEY J [US], et al) [A] 1-10 * 全文 *; CN2507975Y Y 20020828 [A] (YANG JUN [CN]) [A] 1-10 * 全文 *; CN201013159Y Y 20080130 [YX] (XINGHUA TANG [CN]) [Y] 2-4, 7 * 说明书第2页13段-第3页第3段, 图1-2 * [X] 1, 5-6, 8-10; DE202010002880U U1 20100610 [A] (HARREXCO AG [DE]) [A] 1-10 * 全文 *; CN204113033U U 20150121 [Y] (DALIAN HUAGONG INNOVATION TECHNOLOGY CO LTD) [Y] 2, 4, 7 * 说明书第0010段, 图1 *; CN105696917 A 20160622 [A] (DALIAN HUAGONG INNOVATION TECHNOLOGY CO LTD) [A] 1-10 * 全文 *; CN105728263 A 20160706 [Y] (DALIAN HUAGONG INNOVATION TECHNOLOGY CO LTD) [Y] 3-4 * 说明书第0001,0016-0028段, 图1-3 *
CNOI	- E06B3/6715 ; E06B3/6775 ; E04B2/88
PA	- DALIAN HUAGONG INNOVATION TECHNOLOGY CO LTD
TI	- Method for improving insulation performance of glass windows and doors
AB	- The invention discloses a method for improving the insulation performance of glass windows and doors, which is used for transforming single-layer glass windows, doors and curtain walls of old buildings. The improved glass window or door comprises existing single-layer glass A, a window/door frame and sealant, wherein glass with an adhesive tape is adhered to the indoor side of the single-layer glass A, and comprises single-layer glass B and a thermal-insulation adhesive tape adhered to the periphery of the single-layer glass B; a plastic film is adhered to the glass B along the surface of the thermal-insulation adhesive tape; and the glass with the adhesive tape is matched with the shape of the single-layer glass A, is smaller than the door/window frame, and is arranged inside the door/window frame, and a gap H is reserved between the glass with the adhesive tape and the door/window frame. During construction, the plastic film is peeled off, the glass with the adhesive tape and the single-layer glass A are adhered together by means of the thermal-insulation adhesive tape, and the sealant is applied along the gap H. The method is used for transforming old single-layer thermal insulation doors, windows and curtain walls so as to improve the thermal-insulation and sound-insulation effects of the glass doors, windows and curtain walls, realizes automatic batch production of glass with an adhesive tape, and has easily guaranteed quality and high efficiency.

5/10 © EPODOC / EPO

- PN - [CN104563769](#) A 20150429
- PR - CN20131522960 20131023
- AP - CN20131522960 20131023
- DT - I
- PA - GUO RENZHI
- TI - Three-layer double-film glass window
- AB - The invention aims at providing a three-layer double-film glass window. The appearance and the installing form of the glass window are identical to those of an ordinary single-layer or double-layer glass window, a PVC (polyvinyl chloride) plastic film layer is added between double layers of glass, i.e., one PVC plastic film layer is added between the first layer of glass and the second layer of glass, and then, another PVC plastic film layer is added between the second layer of glass and the third layer of glass, so that the three layers of glass and the two layers of PVC plastic films are formed into a whole, and finally, frame adding installation is carried out for forming the three-layer double-film glass window. The glass window has the advantages that the sound isolation effect is obvious, the noise problem can be well solved, and great convenience is brought to the study and the work of people.

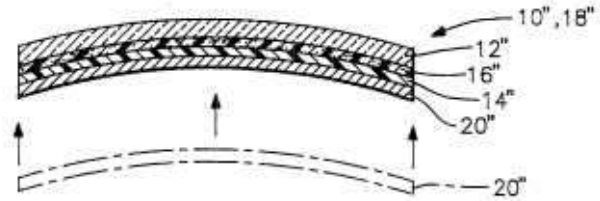
6/10 © EPODOC / EPO

- PN - [US7174692](#) B1 20070213
- PR - US20030703038 20031105; US20020424280P 20021106
- AP - US20030703038 20031105
- DT - *
- CT - [US1703230](#) A []; [US3399294](#) A [];
[US3872804](#) A []; [US4312903](#) A [];
[US4321777](#) A []; [US4595624](#) A [];
[US4687687](#) A []; [US4727789](#) A [];
[US4739690](#) A []; [US5019443](#) A [];
[US5368904](#) A []; [US5596151](#) A [];
[US5765325](#) A []; [US5834124](#) A [];
[US6108999](#) A []; [US6298607](#) B1 [];
[US6334382](#) B2 []; [US6463706](#) B1 [];
[US6708595](#) B1 []; [US6818268](#) B2 [];
[US6889480](#) B2 []; [US7007585](#) B2 [];
[US2002160198](#) A1 []; [US2003080248](#) A1 [];
[US2004216400](#) A1 []
- CCI - [E06B5/12](#) ; [E06B5/125](#)
- PA - US AIR FORCE [US]
- TI - Blast resistant window
- AB - A blast resistant window structure capable of withstanding typical car bomb blast pressures of 100 psi or more and of resisting leakage of chemical or biological agents is described, the window structure including a frame hermetically enclosing two glass panels in confronting relationship defining an air gap therebetween, each glass panel having a thin layer of polymer film on each surface thereof, and a pressure relief valve

in the **frame** for releasing air pressure from within the gap in response to blast pressure imposed on an outer surface of one of the panels.

7/10 © EPODOC / EPO

- PN - [US5622580](#) A 19970422
- PR - US19950390863
19950217; US19930170740
19931221; US19920999525
19921230
- AP - US19950390863 19950217
- DT - *; Rep
- CT - || STSE (A)
[US2725319](#) A 19551129 [
] (TARNOPOL MILTON S);
[US3806387](#) A 19740423 [
] (PEETZ H, et al);
[US3933552](#) A 19760120 [
] (SHUMAKER LYLE L);
[US3960627](#) A 19760601 [
] (HALBERSCHMIDT FRIEDRICH, et
al);
[US4041208](#) A 19770809 [
] (SEEGER NELSON V, et al);
[US4123588](#) A 19781031 [
] (MOLARI JR RICHARD E);
[US4126730](#) A 19781121 [
] (MOLARI JR RICHARD EDGAR);
[US4232080](#) A 19801104 [
] (ORAIN ROGER, et al);
[US4362587](#) A 19821207 [
] (BAUDIN POL, et al);
[US4425406](#) A 19840110 [
] (PALMA HORUS P [US]);
[US4470858](#) A 19840911 [
] (MCMASTER DEXTER [US]);
[US4945002](#) A 19900731 [
] (TANUMA ITSUO [JP], et al);
[US4952457](#) A 19900828 [
] (CARTIER GEORGE E [US], et al);
[US5002820](#) A 19910326 [
] (BOLTON NELSON P [US], et al)
- CCI - [B32B17/10018](#) ; [B32B17/10064](#) ;
[B32B17/10174](#) ; [B32B17/1055](#) ;
[B32B17/10743](#) ; [B32B17/10761](#) ;
[B32B17/1077](#) ; [B32B17/10889](#) ;
[B32B17/10908](#) ; [B32B37/1018](#) ;
[B32B38/1866](#)



- CCA - [B32B2307/412](#) ; [B32B2315/08](#) ;
[B32B2329/00](#) ; [B32B2331/04](#) ;
[B32B2333/04](#) ; [B32B2367/00](#) ;
[B32B2369/00](#) ; [B32B2375/00](#) ;
[B32B2605/08](#)
- TI - Method of forming a curved,
shatterproof glass **laminates**
- AB - A method of making a curved,
shatterproof glass **laminates** for
an automotive or other type
transportation **vehicle window**
or sun roof, which comprises at
least one heat tempered or heat
strengthened **glass layer**, which
may be a low E glass type, at
least one internal combination
elastic shock absorbing-
adhesive **plastic layer** of, for
example, polyvinyl butyral
material, and at least one
antilacerative **plastic layer** of, for
example, polyester or
polycarbonate material, and/or
a polyester material having a
scratch-resistant or self-healing
coating. The **laminates** may be
formed from a **laminates** layup by
engaging the antilacerative layer
with a mold member and
subjecting the resultant
assembly to vacuum, heat and
pressure in an autoclave. The
resultant **laminates** may have a
thickness so as to be readily
usable for replacement or new
manufacture in a standard
existing **frame** or holder. The
mold member is formed of a
relatively thin hard plastic, such
as a polyester or a
polycarbonate, a relatively thin
metal, such as stainless steel, or
be of a normally flat planar
elastic, flexible resin-
impregnated fiber glass
construction which does not
require premolding. When two
glass layers are used, they may
be bonded together by a liquid

adhesive to compensate for curved shape variations in the layers.

TXT - shock absorbing PC mold

8/10 © EPODOC / EPO

PN - [WO9415783](#) A1 19940721

PR - US19930170740
19931221; US19920999525
19921230

AP - WO1993US12527 19931222

DT - **

CT - |US| ISR (A1)
[US4945002](#) A 19900731
[X] (TANUMA ITSUO [JP], et al);
[US4952457](#) A 19900828
[XY] (CARTIER GEORGE E [US], et al)

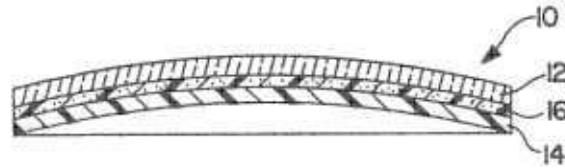
CCI - [B32B17/10018](#) ; [B32B17/10064](#) ;
[B32B17/10174](#) ; [B32B17/1055](#) ;
[B32B17/10743](#) ; [B32B17/10761](#) ;
[B32B17/1077](#) ; [B32B17/10889](#) ;
[B32B17/10908](#) ; [B32B37/1018](#) ;
[B32B38/1866](#)

CCA - [B32B2307/412](#) ; [B32B2315/08](#) ;
[B32B2329/00](#) ; [B32B2331/04](#) ;
[B32B2333/04](#) ; [B32B2367/00](#) ;
[B32B2369/00](#) ; [B32B2375/00](#) ;
[B32B2605/08](#)

PA - MANNHEIM JOSE R [CO]; IDEA INC [US]

TI - CURVED, SHATTERPROOF GLASS **LAMINATE** AND METHOD OF FORMING THE **LAMINATE**

AB - A curved, shatterproof glass **laminates** (10) for an automotive or other type transportation **vehicle window** or sun roof, comprises at least one heat tempered, heat strengthened or annealed **glass layer** (12), which may be a low E glass type, at least one internal combination elastic shock absorbing-adhesive **plastic layer** (16) of, for example, polyvinyl



butyral material, and at least one antilacerative **plastic layer** (14) of, for example, polyester or polycarbonate material, and/or a polyester material having a scratch-resistant or self-healing coating. The **laminates** may be formed from a **laminates** lay-up by engaging the antilacerative layer (14) with a mold member and subjecting the resultant assembly to vacuum, heat and pressure in an autoclave. The resultant **laminates** may have a thickness so as to be readily useable for replacement or new manufacture in a standard existing **frame** or holder. The mold member may be formed of a relatively thin metal, such as stainless steel, or be of a relatively thin hard plastic, such as a polyester or a polycarbonate, such as stainless steel, or be of a normally flat planar elastic, flexible resin-impregnated fiber glass construction which does not require premolding. When two glass layers are used, they may be bonded together by a liquid adhesive to compensate for curved shape variations in the layers.

TXT - shock absorbing

9/10 © EPODOC / EPO

PN - [CN2361799Y](#) Y 20000202

PR - CN1999235486U 19990301

AP - CN1999235486U 19990301

DT - I

PA - BAISITE ENVIRONMENTAL PROTECTI [CN]

TI - Plastic-steel door and **window** device with soundproof and energy-saving effect

AB - The utility model relates to an environment-friendly plastic-steel door and **window** device with soundproof and energy-saving effects, which comprises a plastic-steel **window** (or door) **frame** 1, a plastic-steel **window** sash (or door leaf) 2, an inner **glass layer** 21 and an outer **glass layer** 22, wherein the inner **glass layer** 21 and the

outer **glass layer 22** are fixed on the **window** sash (or door leaf), and the thickness delta 1 and the thickness delta 2 of the two glass layers 21, 22 are different. The two glass surfaces 211, 221 of a hollow cavity 23 formed by the two glass layers are respectively provided with a **polymer film layer** formed by spraying. The device of the utility model has excellent soundproof and heat-insulating performances, and the sound of more than 30 dB (A) can be isolated. The utility model has heat insulation in winter, and can effectively prevent indoor cold air from being outwards discharged and conducted in summer. Energy is saved by about 50%.

10/10 © EPODOC / EPO

PN - [CN2143227Y](#) Y 19931006
 PR - CN1992237221U 19921204
 AP - CN1992237221U 19921204
 DT - I
 PA - WANG ZHEN [CN]
 TI - Two-layer glass binded with T section adhesive tape
 AB - The utility model relates to T-shaped edge strip adhesive hollow glass composed of a T-shaped edge strip, sealing gum and glass and has the advantages of heat preservation, heat insulation, sound insulation, no dew and no frost. The **window frame** fan of a single layer door is provided with the hollow glass and a double layers door and a double layers **window** or a three layers door and a three layers **window** can be replaced. The construction cost is lowered and the flat plate glass can adopt the **film** coated glass to form the T-shaped edge strip **film** coated hollow glass in order to enhance the heat preservation property. A **layer** of transparent **plastic film** can be added in the hollow layer to form the T-shaped edge strip clamping **film** hollow glass. Because of the arrangement of the T-shaped edge strip, the periphery of the glass can be protected and is not easy to be damaged. The T-shaped edge strip adhesive hollow glass is convenient for being arranging on doors and windows made of various materials.

[SS 21] 18 and inter+

Results in EPODOC 51

[SS 22] 21 and (lamine or film)

Results in EPODOC 8

[SS 23] ..li



1/8 © EPODOC / EPO

PN - [CN107054016](#) A 20170818
 PR - US201514969972 20151215
 AP - CN201611153112 20161214
 DT - I
 CCI - [B32B17/064](#) ; [B32B27/304](#) ; [B32B27/40](#) ; [B32B3/08](#) ; [B60J1/00](#)

CUI - [B60J3/007](#)
 CQI - [B32B17/10293](#) ; [B32B17/10348](#)
 CNOI - [B32B17/064](#) ; [B32B27/304](#) ; [B32B27/40](#) ; [B32B33/00](#) ; [B32B3/08](#) ; [B60J1/00](#)
 CCA - [B32B2605/00](#) ; [B32B2605/08](#)
 CNOA - [B32B2605/08](#)
 PA - FORD GLOBAL TECH LLC
 TI - IMPROVED AUTOMOTIVE GLASS BLACKOUT AREA
 AB - An automotive glass for a vehicle is provided by a **glass** panel including an exterior **layer** defining a non-ceramic UV-blocking band on an edge of the glass panel. In an embodiment, the exterior **layer** is a **polymer film** sheet sized to match a size dimension of the glass panel. The polymer **film** sheet may include a tinted portion **bordering** a substantially transparent **interior**. In another embodiment, the exterior layer is a non-ceramic paint applied to a **border** of the glass panel.

2/8 © EPODOC / EPO

PN - [US2017165944](#) A1 20170615
 PR - US201514969972 20151215
 AP - US201514969972 20151215
 DT - **
 CT - || R141 (A1)
[US2010098917](#) A1 20100422 [] (LYON MICHAEL [GB]);
[US2017342282](#) A1 20171130 [] (TORFS RITA [BE], et al);
[US4528232](#) A 19850709 [] (CLIFFE NICHOLAS R [GB]);
[US2009181242](#) A1 20090716 [] (ENNISS JAMES P [US], et al)
 CCI - [B32B17/064](#) ; [B32B27/304](#) ; [B32B27/40](#) ; [B32B3/08](#) ; [B60J1/00](#)
 CUI - [B60J3/007](#)
 CQI - [B32B17/10293](#) ; [B32B17/10348](#)
 CCA - [B32B2605/00](#) ; [B32B2605/08](#)
 PA - FORD GLOBAL TECHNOLOGIES LLC [US]
 TI - AUTOMOTIVE GLASS BLACKOUT AREA
 AB - An automotive glass for a vehicle is provided by a **glass** panel including an exterior **layer** defining a non-ceramic UV-blocking band on an edge of the glass panel. In an embodiment, the exterior **layer** is a **polymer film** sheet sized to match a size dimension of the glass panel. The polymer **film** sheet may include a tinted portion **bordering** a substantially transparent **interior**. In another embodiment, the exterior layer is a non-ceramic paint applied to a **border** of the glass panel.

3/8 © EPODOC / EPO

PN - [CN106351438](#) A 20170125
 PR - CN20161893079 20161013
 AP - CN20161893079 20161013
 DT - I
 CT - || STSE (A)

[KR100232255B](#) B1 19991201 [A] (KOREA ADVANCED INST SCI & TECH [KR])
 [A] 1-10
 * 全文 *;
[CN101250944](#) A 20080827 [Y] (BEIJING HENG TONG CHUANGXIN WOO [CN])
 [Y] 9
 * 权利要求1-3, 附图1-2 *;
[CN102337783](#) A 20120201 [A] (CHONGQING MEIERKANG PLASTIC CO LTD)
 [A] 1-10
 * 全文 *;
[CN204899193U](#) U 20151223 [A] (CHINA STATE CONSTRUCTION CO, et al)
 [A] 1-10
 * 全文 *;
[CN105350767](#) A 20160224 [YX] (CHINA STATE CONSTRUCTION CO, et al)
 [Y] 9
 * 说明书第28-40段, 附图1-3 *
 [X] 1-8, 10

- CNOI - [E04G9/02](#)
 CNOA - [E04G2009/025](#)
 PA - CHINA STATE CONSTRUCTION CO; CHINA CONSTRUCTION-BAILI ENG TECH DEV CO LTD
 TI - High-strength building template **border** section, template and manufacturing method of template
 AB - The invention relates to a high-strength building template **border** section, a template and a manufacturing method of the template. The template comprises a template **border** on the periphery and template panels in the middle; the template **border** is a rectangular **border**; the rectangular **border** is formed by the surrounding of the **border** sections; the cross section of each **border** section is of a shape like a Chinese character gong; the template panels are embedded in grooves; preformed holes are formed at **intervals** in boards of middle vertical parts in the grooves of the **border** sections; each **border** section is formed by carrying out impact molding on a Q345 steel sheet; the adjacent **border** sections are connected in a welding mode on corners; template **borders** are connected by hinge pins passing through the preformed holes. A **plastic** panel is a multi-layer composite board; the middle of the plastic panel is a **glass** fiber reinforcement thermoplastic resin **layer**; **glass** fiber reinforcement felt layers are arranged at both sides of the **glass** fiber reinforcement thermoplastic resin **layer**; protection **film** layers are arranged outside the glass fiber reinforcement felt layers. The high-strength building template **border** section and the template which are disclosed by the invention are simple in structure and reasonable in design; the size of the template **border** can be flexibly regulated; the template **borders** can be connected into the template with a random module number by section vertical face through holes.

4/8 © EPODOC / EPO

- PN - [CN203800063U](#) U 20140827
 PR - CN20142144435U 20140328
 AP - CN20142144435U 20140328
 DT - I
 CCA - [Y02E10/52](#)

PA - HANWHA SOLARONE QIDONG CO LTD

TI - Novel photovoltaic assembly

AB - The utility model discloses a novel photovoltaic assembly which successively a front toughened **glass** substrate, a **polymer** packaging **layer** and a back toughened **glass** substrate from top to bottom, wherein the front toughened glass substrate can absorb or reflect infrared and ultraviolet light, the **polymer** packaging **layer** is **internally** provided with crystalline silica cells, the inner surface of the front toughened glass substrate is a textured surface, and the inner surface of the back toughened **glass** substrate includes a radiating **film layer**. An aluminum alloy **frame** is mounted in the periphery of a laminated layer which is composed of the substrates and packaging layer. The novel photovoltaic assembly is reasonable in structure; during work of the photovoltaic assembly, infrared or ultraviolet light in solar spectrum is absorbed or reflected by the front toughened glass substrate, so that infrared or ultraviolet light entering the packaging layer is reduced, the temperature of the assembly is reduced, and the output power and service life of the assembly are improved; and the radiating **film layer** at the air side of the back glass substrate is conducive to heat radiation of the assembly, the temperature of the assembly is further reduced, and the accumulated power generating capacity of the assembly is increased.

5/8 © EPODOC / EPO

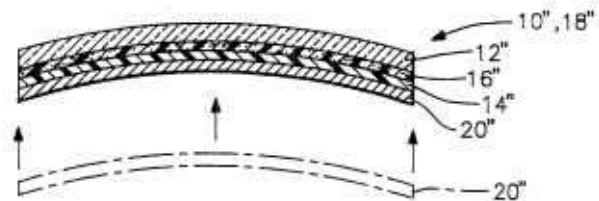
PN - [US5622580](#) A 19970422

PR - US19950390863
19950217; US19930170740
19931221; US19920999525
19921230

AP - US19950390863 19950217

DT - *; Rep

CT - || STSE (A)
[US2725319](#) A 19551129 [
] (TARNOPOL MILTON S);
[US3806387](#) A 19740423 [
] (PEETZ H, et al);
[US3933552](#) A 19760120 [
] (SHUMAKER LYLE L);
[US3960627](#) A 19760601 [
] (HALBERSCHMIDT FRIEDRICH, et
al);
[US4041208](#) A 19770809 [
] (SEEGER NELSON V, et al);
[US4123588](#) A 19781031 [
] (MOLARI JR RICHARD E);
[US4126730](#) A 19781121 [
] (MOLARI JR RICHARD EDGAR);
[US4232080](#) A 19801104 [
] (ORAIN ROGER, et al);
[US4362587](#) A 19821207 [
] (BAUDIN POL, et al);



- [US4425406](#) A 19840110 [] (PALMA HORUS P [US]);
[US4470858](#) A 19840911 [] (MCMMASTER DEXTER [US]);
[US4945002](#) A 19900731 [] (TANUMA ITSUO [JP], et al);
[US4952457](#) A 19900828 [] (CARTIER GEORGE E [US], et al);
[US5002820](#) A 19910326 [] (BOLTON NELSON P [US], et al)
- CCI - [B32B17/10018](#) ; [B32B17/10064](#) ;
[B32B17/10174](#) ; [B32B17/1055](#) ;
[B32B17/10743](#) ; [B32B17/10761](#) ;
[B32B17/1077](#) ; [B32B17/10889](#) ;
[B32B17/10908](#) ; [B32B37/1018](#) ;
[B32B38/1866](#)
- CCA - [B32B2307/412](#) ; [B32B2315/08](#) ;
[B32B2329/00](#) ; [B32B2331/04](#) ;
[B32B2333/04](#) ; [B32B2367/00](#) ;
[B32B2369/00](#) ; [B32B2375/00](#) ;
[B32B2605/08](#)
- TI - Method of forming a curved, shatterproof glass **laminates**
- AB - A method of making a curved, shatterproof glass **laminates** for an automotive or other type transportation vehicle window or sun roof, which comprises at least one heat tempered or heat strengthened **glass layer**, which may be a low E glass type, at least one **internal** combination elastic shock absorbing-adhesive **plastic layer** of, for example, polyvinyl butyral material, and at least one antilacerative **plastic layer** of, for example, polyester or polycarbonate material, and/or a polyester material having a scratch-resistant or self-healing coating. The **laminates** may be formed from a **laminates** layup by engaging the antilacerative layer with a mold member and subjecting the resultant assembly to vacuum, heat and pressure in an autoclave. The

resultant **laminated** may have a thickness so as to be readily usable for replacement or new manufacture in a standard existing **frame** or holder. The mold member is formed of a relatively thin hard plastic, such as a polyester or a polycarbonate, a relatively thin metal, such as stainless steel, or be of a normally flat planar elastic, flexible resin-impregnated fiber glass construction which does not require premolding. When two glass layers are used, they may be bonded together by a liquid adhesive to compensate for curved shape variations in the layers.

TXT - shock absorbing PC mold

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PN - [WO9415783](#) A1 19940721

PR - US19930170740
19931221; US19920999525
19921230

AP - WO1993US12527 19931222

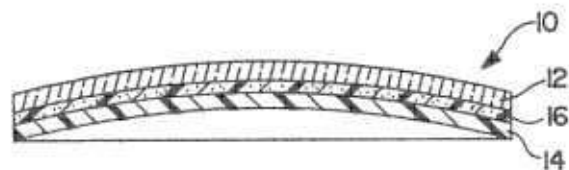
DT - **

CT - [US] ISR (A1)
[US4945002](#) A 19900731
[X] (TANUMA ITSUO [JP], et al);
[US4952457](#) A 19900828
[XY] (CARTIER GEORGE E [US], et al)

CCI - [B32B17/10018](#) ; [B32B17/10064](#) ;
[B32B17/10174](#) ; [B32B17/1055](#) ;
[B32B17/10743](#) ; [B32B17/10761](#) ;
[B32B17/1077](#) ; [B32B17/10889](#) ;
[B32B17/10908](#) ; [B32B37/1018](#) ;
[B32B38/1866](#)

CCA - [B32B2307/412](#) ; [B32B2315/08](#) ;
[B32B2329/00](#) ; [B32B2331/04](#) ;
[B32B2333/04](#) ; [B32B2367/00](#) ;
[B32B2369/00](#) ; [B32B2375/00](#) ;
[B32B2605/08](#)

PA - MANNHEIM JOSE R [CO]; IDEA INC



[US]

- TI - CURVED, SHATTERPROOF
GLASS **LAMINATE** AND METHOD
OF FORMING THE **LAMINATE**
- AB - A curved, shatterproof
glass **laminates** (10) for an
automotive or other type
transportation vehicle window
or sun roof, comprises at least
one heat tempered, heat
strengthened or annealed **glass**
layer (12), which may be a low E
glass type, at least one **internal**
combination elastic shock
absorbing-adhesive **plastic layer**
(16) of, for example, polyvinyl
butyral material, and at least
one antilacerative **plastic layer**
(14) of, for example, polyester or
polycarbonate material, and/or
a polyester material having a
scratch-resistant or self-healing
coating. The **laminates** may be
formed from a **laminates** lay-up
by engaging the antilacerative
layer (14) with a mold member
and subjecting the resultant
assembly to vacuum, heat and
pressure in an autoclave. The
resultant **laminates** may have a
thickness so as be readily
useable for replacement or new
manufacture in a standard
existing **frame** or holder. The
mold member may be formed of
a relatively thin metal, such as
stainless steel, or be of a
relatively thin hard plastic, such
as a polyester or a
polycarbonate, such as stainless
steel, or be of a normally flat
planar elastic, flexible resin-
impregnated fiber glass
construction which does not
require premolding. When two
glass layers are used, they may
be bonded together by a liquid
adhesive to compensate for
curved shape variations in the

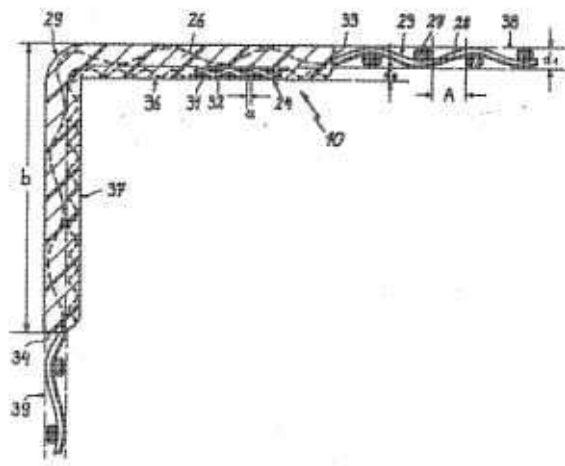
layers.
 TXT - shock absorbing

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PN - [JPH0314245](#) A 19910122
 PR - JP19890150262 19890613
 AP - JP19890150262 19890613
 DT - I
 FI - H01L21/56&R
 FT - 5F061/AA01; 5F061/BA01; 5F061/CA03; 5F061/CB03; 5F061/CB11; 5F061/DE02
 PA - TOSHIBA CORP
 TI - RESIN-SEALING METHOD FOR SEMICONDUCTOR DEVICE
 AB - PURPOSE:To obtain a semiconductor device excellent in fineness, heat resistance, and thermal shock resistance while a resin layer is thinned by a method wherein both surfaces of an **intermediate** semiconductor device is sandwiched by a pair of sheet type members, heated gas is blown against the outside of each sheet with pressure, and the device is resin-sealed by polymer resin in a pair of the sheet members.
 CONSTITUTION:Both surfaces of an **intermediate** semiconductor device 2 wherein a semiconductor chip 6 is fixed on a retaining member like a lead **frame** 5 are sandwiched by a pair of thin sheet type members 8A, 8B; heated gas 3a, 3b is blown against the outside of each of the sheets 8A, 8B with pressure and supplied; both surfaces of the **intermediate** semiconductor device 2 is resin- sealed by polymer resin in a pair of the sheets 8A, 8B. For example, the above- mentioned sheets 8A, 8B are constituted of a base **layer** 8a and a **polymer** material **layer** 8b like epoxy resin. The base layer 8a is composed of a polyimide resin **film**, non-woven fabric, etc. As the **polymer** material constituting the **polymer** material **layer** 8b, one having high **glass** transition temperature, humidity resistance and thermal shock resistance is used.

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PN - [EP0134039](#) A2 19850313
 PNFP - EP0134039 A3 19860604
 - EP0134039 B1 19880518
 PR - DE19833329963
 19830819; DE19833338278
 19831021
 AP - EP19840109913 19840820
 DT - *; Rep
 CT - || STSE (A3)
[DE2641585](#) A1 19780323
 [AD] (BIHL WILLI, et al);
[FR1502610](#) A 19671124 [A];
[US2196086](#) A 19400402
 [A] (SPROUSE JAMES J, et al);
[DE8222937U](#) U1 19821118 [AD];
[DE3238312](#) C1 19840315



	[A] (GEHRING MANFRED); US2590846 A 19520401
	[A] (CUTTING RICHARD H); US2904856 A 19590922
	[A] (ROBINSON GEORGE L); US2643423 A 19530630
	[A] (BRENDL RAYMOND J); GB1225790 A 19710324 [A]; US3109207 A 19631105
	[A] (COOPER JACK A)
CCI	- E04F13/068 ; E04F13/04 ; E04F13/06
CCA	- E04F2013/063
PA	- (A2) HALM PETER
TI	- (A2) Edge-protecting border . - (A3 B1) EDGE-PROTECTING BORDER
AB	- (A2) 1. Arris cover screed angle (10, 10') as corner reinforcement for a stopper coat (13) which is to be applied on the heat-insulating layer (18, 19) of a building provided with a full heat protection jacket and which is to serve as carrier for the screening layer (17) and is reinforced with glass fiber (FRP) fabric mats (11, 12), or arris cover screed angle (70, 70') as reinforcement for at least the corner area of a mineral screening layer (71) to be applied directly upon the - brick or concrete - walls (72, 73) of the building, comprising at least one strip of an FRP material (22, 23') in the form of an angle section made from an FRP fabric suitable for use as reinforcement for the stopper layer, the said strip of fabric reinforced in the corner area, i. e. along the corner of the angle section and the inner, strip-shaped portions of the adjacent legs of the angle

and having free - not reinforced - marginal strips (38, 39) exhibiting a width of approx. 4cm which extend beyond the outer longitudinal edges of the reinforced corner area of the section and which - in the applied position of the arris cover screed cover, if the latter is used for reinforcing the stopper and adhesive coat of a full heat protection system - overlaps an adjacent glass fibre mat reinforcement (11, 12) of the stopper and adhesive coat (13) over the greatest part of its width, characterized in that the corner reinforcement of the angle section (10, 10' ; 70, 70') formed by the said reinforcing strip of fabric (23 ; 23') consists of another FRP fabric strip (24 ; 24' ; 24'') arranged immediately adjacent the said reinforcing fabric strip (23 ; 23') and is embedded in a plastic material, at least at points distributed evenly over the contact surface of the said two fabric strips (23 and 24 ; 23' and 24', 23 and 24'') where fiber bundles of the reinforcing fabric strip (23 ; 23') **intersect** or are in contact with fibre bundles of the said reinforcing fabric strip (24 ; 24', 24'') so that the greatest effective thickness of the **plastic layer** and/or **plastic layer** elements formed thereby is equal to the effective total thickness of the said fabric strips (23 and 24 ; 23' and 24' ; 23 and 24'') in their contact areas, leaving thin top **film** layers out or regard.