

EUROPEAN PATENT OFFICE  
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 229

DATE: AUGUST 1, 2016

PROJECT DP0061

**The following classification changes will be effected by this Notice of Changes:**

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
<b>New Definitions:</b>	B32B	15/01
	B32B	17/00
	B32B	17/06
	B32B	17/08
	B32B	17/10
	B32B	18/00

**No other subclasses/groups are impacted by this Notice of Changes.**

**This Notice of Changes includes the following [Check the ones included]:**

1. CLASSIFICATION SCHEME CHANGES
  - A. New, Modified or Deleted Group(s)
  - B. New, Modified or Deleted Warning Notice(s)
  - C. New, Modified or Deleted Note(s)
  - D. New, Modified or Deleted Guidance Heading(s)
2. DEFINITIONS (New or Modified)
  - A. DEFINITIONS (Full definition template)
  - B. DEFINITIONS (Definitions Quick Fix)
3.  REVISION CONCORDANCE LIST (RCL)
4.  CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5.  CROSS-REFERENCE LIST (CRL)

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## 2. A. DEFINITIONS (i.e. New or Modified)

Insert the following new definitions.

### **B32B15/01**

all layers being exclusively metallic {(making layered metal workpieces by pressure cladding **B23K20/22**; making coatings with a metallic material characterised by its composition **C23C30/00**)}

#### **Definition statement**

*This group covers:*

Layered products with all layers being metallic in the form of sheets/plates, distinct layers. They can be made by any possible method such as roll bonding, cladding, brazing, coating etc.

#### **Relationship between large subject matter areas**

If the layered product comprises a layer which is not metallic such as polymer, ceramic, glass etc. then it is not classified in **B32B15/01**- **B32B15/018**, but in other parts of **B32B**.

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Biomedical applications, stents	<a href="#">A61F</a> , <a href="#">A61L</a>
Rolling of metals	<a href="#">B21B</a>
Powder metallurgy	<a href="#">B22F</a>
Soldering/welding, roll cladding, pressure cladding	<a href="#">B23K</a>
Changing the physical structure of ferrous metals/alloys	<a href="#">C21D</a>
Changing the physical structure of non ferrous metals/alloys	<a href="#">C22F</a>
Coatings /Sputtering targets	<a href="#">C23C</a> , <a href="#">C23C14/00</a>

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Heat exchangers	F28F
Armour constructions/plates	F41H
Electrical wires	H01B
Magnets	H01F
Batteries/fuel cells	H01M
Electrical connectors	H01R
Electronic components	H05K

### Special rules of classification within this subclass/group

In the groups [B32B15/01](#) - [B32B15/018](#), the last place rule is followed (classification in the last appropriate place) combined with multiple classifications.

In metallic layered products having layer(s) of a specific composition, in addition to the corresponding [B32B15/01](#) group the composition of each layer is classified in [C22C](#) ([C22C5/00](#) - [C22C45/00](#)).

When the layered is produced by a specifically described method (examples, claims) then the method is classified as well ([B22F](#), [C23C](#), [B23K](#), [C25D](#), [B21B](#) etc.).

When the layered product is intended for a particular use then the use is classified as well (see informative references for some of them).

Galvanized steels having a specific composition of a substrate and/or of the Zn layer are classified in [B32B15/013](#).

Brazing sheets/composite materials (e.g. for heat exchangers) with all layers formed of aluminium or aluminium alloys are classified in [B32B15/016](#).

A layered product consisting of a layer of steel, a layer of aluminium alloy and a layer of Ni alloy will be classified in both [B32B15/012](#) and [B32B15/015](#).

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## B32B17/00

### Definition statement

*This group covers:*

Layered products comprising glass in sheet form ([B32B17/06](#)), or fibres of glass or slag ([B32B17/02](#)) united with another layer of any kind. Glass in the form of a sheet or film bonded with a transparent synthetic resin to another transparent layer (laminated glazing – [B32B17/10](#)).

### Relationship between large subject matter areas

Glass fibres are suitable as reinforcement of variable polymer structures, as membranes or heat or sound insulating layer.

Laminated glazings are used for automotive and transport applications in general, for architectural purposes, transparent armour and photovoltaic modules.

### References relevant to classification in this group

*This group does not cover:*

Optical devices made from glass and having a multilayer structure	<a href="#">G02B1/00</a>
Coatings on glass	<a href="#">C03C17/00</a>
Surface treatment of glass fibres	<a href="#">C03C25/00</a>
Joining pieces of glass to pieces of other inorganic material	<a href="#">C03C27/00</a>
Producing optical elements from plastics	<a href="#">B29D11/00</a>

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*Examples of places where the subject matter of this group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Photovoltaic modules	<a href="#">H01L31/048</a>
Automotive windows	<a href="#">B60J1/00</a>
Railway windows	<a href="#">B61D25/00</a>
Aircraft windows	<a href="#">B64C1/14</a>
Heating windshields	<a href="#">H05B3/84</a>

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Fibre-reinforced material	<a href="#">B29C66/721</a>
Glass compositions	<a href="#">C03C3/00</a>
Manufacture of prepregs	<a href="#">C08J5/24</a>
Compositions of polymers	<a href="#">C08L</a>
Insulating glass windows	<a href="#">E06B3/67</a>
Transparent armour	<a href="#">F41H5/0407</a> , <a href="#">F41H5/0471</a>
Window antennas	<a href="#">H01Q1/12</a>
Printed circuit boards	<a href="#">H05K1/03</a>
Transparent shielding materials	<a href="#">H05K9/00</a>
Alarm windows	<a href="#">G08B13/04</a>

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## Special rules of classification within this group

In this group a layer of organic glass is not considered as a glass layer but as a synthetic resin layer and is classified using either CPC Combination-sets or as additional information.

In the framework of B32B, the relation of a glass layer to adjacent layers is reflected by the entries under [B32B17/06](#).

Within [B32B17/064](#), certain materials are further specified in [B32B17/08](#) and [B32B17/1055](#) when they are used to create a laminated glazing designed and manufactured for displaying certain properties under safety aspects.

For these safety glazings, [B32B17/10](#) applies in general.

Inventions classified in group [B32B17/10](#) are also classified in any appropriate group of lower hierarchy.

[B32B17/02](#) is subordinated to the framework of [B32B5/02](#), the presence of glass fibres being documented by Indexing Code [B32B2262/101](#).

[B32B17/02](#) or [B32B17/04](#) is only employed if [B32B17/06](#) applies as well.

## Glossary of terms

*In this group, the following terms (or expressions) are used with the meaning indicated:*

safety glazing, laminated glazing	glass pane bonded to another glass pane or a tough polymeric film via an interlayer sheet
interlayer sheet	thermoplastic polymer bonding the components of a safety glazing to one another
intermediate film	thermoplastic polymer used as a barrier or as a carrier for functional layers and not having adhesive properties
plasticizer	organic compound which reduces the glass transition temperature of the interlayer

## Synonyms and Keywords

*In patent documents the following abbreviations are often used:*

PVB	polyvinyl butyral
phr	parts per hundred of resin - amount of plasticizer per 100 parts of PVB

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IG	insulation glass
FRP	fibre-reinforced plastic
PCB	printed circuit board
PWB	printed wiring board

## B32B17/06

### Definition statement

*This group covers:*

Layered products comprising mineral glass in sheet form united with another layer of generic kind immediately adjacent to a glass sheet (see however classification rule with respect to [B32B17/064](#)).

The layers need not be permanently secured, such as a releasable protective layer.  
Fire-protective glazings comprising an intumescent layer.

### Relationship between large subject matter areas

Various materials are used in combination with sheets of glass for the enhancement of the properties of one of the layer, for instance, for protection or reinforcement of natural stone, for architectural purposes in general ([E06B3/54](#) or [E04F13/14](#)), or for displays in a variety of devices.

### References relevant to classification in this group

*This group does not cover:*

Optical devices made from glass and having a multilayer structure	<a href="#">G02B1/00</a>
Coatings on glass	<a href="#">C03C17/00</a>
Producing optical elements from plastics	<a href="#">B29D11/00</a>

*Examples of places where the subject matter of this group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Coverings or linings	<a href="#">E04F13/14</a>
Curtain walls	<a href="#">E06B3/54</a>
Liquid crystal displays	<a href="#">G02F1/13</a>

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## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Designs with unusual light effects	<a href="#">B44F1/00</a>
Insulating glass windows	<a href="#">E06B3/67</a>
Billboards	<a href="#">G09F15/00</a>
Show cases	<a href="#">A47F3/0434</a>
Furniture panels or shelves	<a href="#">A47B96/20</a>
Construction of refrigerators	<a href="#">F25D23/00</a>
Alarm windows	<a href="#">G08B13/04</a>
Transparent shielding materials	<a href="#">H05K9/0094</a>

## Special rules of classification within this group

In this group a layer of organic glass is not considered as a glass layer but as a synthetic resin layer.

In the framework of [B32B](#), the spatial relationship of a glass layer to adjacent layers is documented by the entries in the groups of [B32B17/06](#). The definition of [B32B17/064](#) covers synthetic resins which are further detailed in group [B32B17/1055](#) to specify what is called a laminated glazing, said glazing being designed and manufactured for displaying certain properties under safety aspects (see the Glossary of terms of group [B32B17/10](#)).

When group [B32B17/10](#) applies, [B32B17/064](#) is not used.

## **B32B17/08**

### **of cellulosic plastic substance {or gelatin}**

#### **Definition statement**

*This group covers:*

Layered products comprising mineral glass in sheet form next to a layer of a cellulose derivative or gelatin as polymeric substance.



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## Relationship between large subject matter areas

This group covers laminated glazings developed in the early days of this technical area, in particular for automotive applications (automotive windscreens comprising synthetic resin see [B32B17/1055](#)).

## References relevant to classification in this group

*This group does not cover:*

Containers or dishes for laboratory use	<a href="#">B01L3/00</a>
Coatings on glass	<a href="#">C03C17/00</a>
Diffraction gratings	<a href="#">G02B5/18</a>

## B32B17/10

### Definition statement

*This group covers:*

Laminated glazings wherein a glass sheet, or a glass-like polymer sheet or film is permanently bonded to a further glass sheet by means of a layer of transparent synthetic resin specifically chosen in order to provide for a predetermined force of adhesion to the glass layer by subjecting the components to a production process which puts emphasis on the absence of optical defects, i.e., more than just gluing together two planar pieces (for this general embodiment, see [B32B17/064](#)).

## Relationship between large subject matter areas

Laminated glazings are used for automotive and transport applications (automotive windows in general [B60J1/00](#)), for architectural purposes ([E06B3/54](#) or [E04F13/15](#)), transparent armour ([F41H5/0407](#)) and photovoltaic modules ([H01L31/048](#)).

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## References relevant to classification in this group

*This group does not cover:*

Optical devices made from glass and a polarizing film	<a href="#">G02B5/3025</a>
Coatings on glass in general	<a href="#">C03C17/00</a>
Display screens using glass sheets	<a href="#">G02F1/13</a>

*Examples of places where the subject matter of this group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Photovoltaic modules	<a href="#">H01L31/048</a>
Transparent armour	<a href="#">F41H5/0407</a>
Heatable windshields	<a href="#">H05B3/84</a>

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Designs with unusual light effects	<a href="#">B44F1/00</a>
Insulating glass windows	<a href="#">E06B3/67</a>
Billboards	<a href="#">G09F15/00</a>
Show cases	<a href="#">A47F3/0434</a>
Furniture panels or shelves	<a href="#">A47B96/20</a>
Construction of refrigerators	<a href="#">F25D23/00</a>
Alarm windows	<a href="#">G08B13/04</a>
Transparent shielding materials	<a href="#">H05K9/0094</a>

## Special rules of classification within this group

In this group a layer of organic glass is not considered as a glass layer but as a synthetic resin layer and is classified as additional information. [B32B17/064](#) does not apply.

For laminated glazings comprising at least one layer of mineral glass, an interlayer sheet and an external layer of a synthetic polymeric sheet or film, classification is made using the appropriate group selected from below [B32B17/10009](#) together with the [B32B](#)

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orthogonal Indexing Code which designates the material of the said external polymer layer assigned as additional information.

If a layer of a polymeric sheet or film is sandwiched by two interlayer sheets, classification is made using a Combination-set created by linking the Indexing Code of the polymer material to B32B17/10, e.g., B32B17/10 + B32B2367/00.

Interlayer sheets are further specified in group B32B17/1055.

Classification is made in anyone of groups B32B17/10009 to B32B17/10807, thereby capturing each aspect of the invention.

## Glossary of terms

*In this group, the following terms (or expressions) are used with the meaning indicated:*

safety glazing, laminated glazing	glass pane bonded to another glass pane or a tough polymeric film via an interlayer and satisfying certain criteria as to safety standards
interlayer sheet	thermoplastic polymer used as adhesive for bonding the components of a safety glazing to one another
intermediate film	thermoplastic polymer used as a barrier or as a carrier for functional layers and not having adhesive properties and being thinner than a sheet
plasticizer	organic compound which reduces the glass transition temperature of the interlayer, mostly PVB

## Synonyms and Keywords

*In patent documents the following abbreviations are often used:*

PVB	polyvinyl butyral
phr	parts per hundred of resin - amount of plasticizer per 100 parts of PVB
IG(U)	insulation glass (unit)

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## B32B18/00

**{Laminated products composed mainly of ceramics, e.g. refractory materials (semi-permeable membranes made of inorganic material [B01D71/02](#); ceramic coatings on glass [C03C17/00](#); joining of ceramic layers [C04B37/00](#); coating of ceramics [C04B41/45](#); applying ceramic coatings on metallic materials [C23](#); applying ceramic coatings on silicon for semi-conductor purposes [H01L](#))}**

### Definition statement

*This group covers:*

At least two pre-shaped green ceramic, ceramic pre-form (e.g. a ceramic fiber pre-form) or sintered ceramic layers are joined together, where the emphasis is not on the joining method. It also encompasses two layers of ceramic powders that are pressed together in a press. If after joining the two ceramic layers other type of layers, e.g. metallic or plastic layers are joined to the initial ceramic laminate, classification under other main groups of [B32B](#) will be necessary as well, but classification in [B32B18/00](#) remains. If in between the two ceramic layers there is a thin, non-essential layer of another material, e.g. a metallic electrode, it is still classified in [B32B18/00](#), but classification in other groups of [B32B](#) should be considered. [B32B18/00](#) is normally not used for laminates containing identical ceramic layers, such as in multilayer capacitors.

[B32B18/00](#) also contains cold bonding of ceramic substrates.

### Relationship between large subject matter areas

- applying ceramic coatings on metallic materials [C23](#);
- applying ceramic coatings on silicon for semi-conductor purposes [H01L](#).

### References relevant to classification in this subclass/group

*This subclass/group does not cover:*

Laminates containing only one ceramic layer	<a href="#">B32B9/005</a>
joining of a ceramic layer to another layer	<a href="#">C04B37/00</a>
coating of ceramics	<a href="#">C04B41/45</a>

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## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

semi-permeable membranes made of inorganic material	<a href="#">B01D71/02</a>
layered structures comprising at least one glass sheet	<a href="#">B32B17/00</a>
ceramic coatings on glass	<a href="#">C03C17/00</a>
Clay-wares	<a href="#">C04B33/00</a>
ceramic layers characterised by their composition	<a href="#">C04B35/00</a>
porous ceramic products	<a href="#">C04B38/00</a>
sensor elements of laminated structure containing a solid electrolyte	<a href="#">G01N27/4071</a>
Stacked fixed capacitors, e.g. multilayer ceramic capacitors	<a href="#">H01G4/30</a>
Aspects relating to ceramic starting mixtures or sintered ceramic products	<a href="#">C04B2235/00</a>
Aspects relating to ceramic laminates or to joining of ceramic articles with other articles by heating	<a href="#">C04B2237/00</a>
Printing on laminates	<a href="#">B32B38/14</a>

## Special rules of classification within this subclass/group

Under [C04B37/00](#) the emphasis is on how the articles are joined. If two ceramic layers are joined, but the emphasis is not on how they are joined, classification would be in [B32B18/00](#).

Secondary aspects of making ceramic laminates ([B32B18/00](#)) and of joining ceramic articles with other articles through heating ([C04B37/00](#)) are classified with Indexing Code [C04B2237/00](#), e.g. the composition of the layers or articles that are laminated or joined.

Aspects regarding the heat treatments that are used for laminating are classified in [C04B35/64](#) and with Indexing Code [C04B2235/65](#), where the heat treatment of the laminating step should be considered as a sintering step. If for instance pressure is exerted during heating to laminate the articles, [C04B35/645](#) should be given. Aspects regarding the atmosphere of the heating step, possible annealing steps, heating rate, cooling rate, etc. are given Indexing Code [C04B2235/65](#).

If much detail regarding the composition and/or synthesis of one or more ceramic layers or articles is given, classification in [C04B35/00](#) should be considered.

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Electrode and electrodes layers that are inserted between ceramic substrate layers are normally not seen as interlayers, since they normally do not have the function of joining the two ceramic substrates. They therefore do not receive a [C04B2237/12](#) Indexing Code. Only if it is clear that the electrode does have a joining effect, would it be regarded as an interlayer, and an Indexing Code under [C04B2237/12](#) would be allocated. In that case [C04B37/006](#) has to be used and there is no classification in [B32B18/00](#).