

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### SHAPING

## B32 LAYERED PRODUCTS

### B32B LAYERED PRODUCTS, i.e. PRODUCTS BUILT-UP OF STRATA OF FLAT OR NON-FLAT, e.g. CELLULAR OR HONEYCOMB, FORM

#### NOTES

1. This subclass covers:
  - layered products comprising different kinds of material or layered products not characterised by the particular kind of material used;
  - a product similar to a layered product but comprising only material in the form of a sheet or network embedded in a mass of plastics or of physically-similar substances which mass penetrates the said sheet or network and lies on both sides of the latter (e.g. so that the sheet or network reinforces the plastics substance) PROVIDED THAT the embedded sheet or network extends coherently or connectedly over substantially the whole area of the product; thus the embedded sheet or network may be a fabric or a series of rods connected by cross wires. The manner of making such a product is, however, classified in this subclass only if it is essentially a process of building-up an assembly of layers of which at least one outer layer is preformed. If the embedded material comprises only a series of unconnected rods, the product is not classified in this subclass.
2. This subclass does not cover:
  - processes or apparatus used in, or in connection with, the production or treatment of any product, if the process or apparatus is fully classifiable in a single other class or subclass for processes or apparatus, e.g. [B05](#), [B29](#), [B44D](#), [C08J](#), [C09J](#), [C23](#);
  - compositions or preparation or treatment thereof, unless they are essentially restricted to layered products and cannot be fully classified in another class without ignoring this restriction;
  - etched metallic pattern on the surface of a printed circuit board.
3. In this subclass:
  - a film formed on a layer by spreading a substance thereon is not considered to constitute a layer itself if it serves only as an adhesive or its purpose is merely to finish a surface of a product;
  - groups designating products cover also methods or apparatus specially adapted for producing such products.
4. In this subclass, the following terms or expressions are used with the meanings indicated:
  - "layer" is a sheet or strip or anything else having a small thickness relatively to its other dimensions which, together with at least one other layer, exists in a product, whether it pre-existed, e.g. as a separate sheet or strip, or was formed during the production of the layered product. It may or may not be homogeneous or cohesive; it may be an assembly of fibres or pieces of material. It may be discontinuous, e.g. in the form of a grating, honeycomb, or frame. It may or may not be in complete contact with the next layer, e.g. a corrugated layer against a flat layer;
  - "layered product" comprises at least two layers secured together. The term "secured" includes any method of uniting layers, e.g. needling, stitching, gluing, nailing, dovetailing or the interposition of an adhesive or adhesive impregnated support. It may also be an intermediate stage in the production of an article which is not layered in its final form, e.g. a panel with a protective layer which is stripped off when the panel is placed in its position of use. The layers are preformed layers or layers formed IN SITU on a preformed layer and may consist of coherent solid materials, including honeycombs and other cellular materials or of non-coherent solid materials composed of assemblies of strands, strips, fibres, tiles or the like;
  - "filamentary layer" means a layer of threads or filaments of any substance (e.g. wires) of more or less unlimited length placed in an orderly arrangement and secured together; it may be woven, knitted, braided, or netted, or formed of threads crossed or laid side by side and bonded together;
  - "fibrous layer" means a random assembly of fibres of limited length, e.g. felt, fleece; the fibres {being} interengaged or connected, e.g. by adhesive.
5. In this subclass,
  - "First place rule" is used in the following groups [B32B 9/04](#), [B32B 11/04](#), [B32B 13/04](#), [B32B 15/04](#), [B32B 19/04](#), [B32B 21/04](#), [B32B 23/046](#) - [B32B 23/12](#), [B32B 25/04](#), [B32B 27/06](#), [B32B 29/002](#).

However, when these groups are not characterised by the specific material adjacency to be classified, then, multiple classification is given, e.g. a layered product having a stone layer next to a bituminous layer would be classified in [B32B 9/04](#) and in [B32B 11/04](#). For a cellulosic plastic layer next to a metal layer or to a wood layer [B32B 23/042](#) or [B32B 23/044](#), respectively, take precedence (i.e. first rule does not apply). For layered products comprising at least two ceramic layers, products comprising only ceramic layers are classified in group [B32B 18/00](#) and products comprising two ceramics layers and at least one layer of another material are classified in [B32B 18/00](#) and [B32B 9/04](#).

**B32B**

B32B

(continued)

**WARNING**

The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

B32B 1/04	covered by	<a href="#">B32B 3/02</a> - <a href="#">B32B 3/08</a>
B32B 1/06	covered by	<a href="#">B32B 13/02</a>
B32B 3/08 - <a href="#">B32B 3/22</a>	covered by	<a href="#">B32B 3/08</a> - <a href="#">B32B 3/22</a>
B32B 3/24	covered by	<a href="#">B32B 3/266</a>
B32B 5/28	covered by	<a href="#">B32B 2260/021</a> - <a href="#">B32B 2260/023</a>
B32B 17/02	covered by	<a href="#">B32B 2262/101</a>
B32B 17/04	covered by	<a href="#">B32B 2262/101</a> and <a href="#">B32B 2260/04</a>
B32B 17/12	covered by	<a href="#">B32B 17/067</a>
B32B 23/02	covered by	<a href="#">B32B 2262/04</a> and <a href="#">B32B 5/02</a> - <a href="#">B32B 5/12</a>
B32B 27/02	covered by	<a href="#">B32B 2262/02</a> - <a href="#">B32B 2262/0292</a> and <a href="#">B32B 5/02</a> - <a href="#">B32B 5/12</a>
B32B 27/04	covered by	<a href="#">B32B 2260/048</a>

**1/00 Layered products having a general shape other than plane**

3/10

- characterised by a discontinuous layer, i.e. formed of separate pieces of material

**NOTE**

For classification of a product in this group, surface unevennesses or non-uniformities and the shape of individual layers are ignored.

**NOTE**

In this group, a series of spaced separate elements forming in effect a broken surface should be regarded as a layer.

- 1/02 . Receptacles {, i.e. rigid containers}, e.g. tanks
- 1/04 . characterised by feature of form at particular places, e.g. in edge regions {(not used)}
- 1/06 . characterised by fillings or added members in hollow portions {(not used)}
- 1/08 . Tubular products

3/12

- . . characterised by a layer of regularly- arranged cells, e.g. a honeycomb structure

3/14

- . . characterised by a face layer formed of separate pieces of material {which are juxtaposed side-by-side ([B32B 5/02](#) takes precedence)}

3/16

- . . . secured to a flexible backing

3/18

- . . characterised by an internal layer formed of separate pieces of material {which are juxtaposed side-by-side ([B32B 5/02](#) takes precedence)}

**3/00 Layered products comprising a layer with external or internal discontinuities or unevennesses, or a layer of non-planar form {(fibrous or filamentary layers [B32B 5/02](#); particulate layers [B32B 5/16](#); foamed layers [B32B 5/18](#)); Layered products having particular features of form (receptacles or tubular products [B32B 1/00](#))}**

3/20

- . . . of hollow pieces, e.g. tubes; of pieces with channels or cavities

3/22

- . . . of spaced pieces {(not used)}

3/26

- characterised by a particular shape of the outline of the cross-section of a continuous layer; characterised by a layer with cavities or internal voids {([B32B 27/205](#) takes precedence; foam layer [B32B 15/08](#)); {characterised by an apertured layer}

**WARNING**

Group [B32B 3/00](#) is incomplete pending reclassification of documents from group [B29D 2009/00](#).

Groups [B29D 2009/00](#) and [B32B 3/00](#) should be considered in order to perform a complete search.

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- . . {characterised by a layer having non-uniform thickness}

3/266

- . . {characterised by an apertured layer, the apertures going through the whole thickness of the layer, e.g. expanded metal, perforated layer, slit layer regular cells [B32B 3/12](#)}

- 3/02 . characterised by features of form at particular places, e.g. in edge regions {(non-uniform thickness [B32B 3/263](#))}

3/28

- . . characterised by a layer comprising a deformed thin sheet {, i.e. the layer having its entire thickness deformed out of the plane}, e.g. corrugated, crumpled ([B32B 29/08](#) takes precedence)

- 3/04 . . characterised by {at least one} layer folded at the edge, e.g. over another layer {; characterised by at least one layer enveloping or enclosing a material}

- 3/06 . . for securing layers together; for attaching the product to another member, e.g. to a support {, or to another product, e.g. groove/tongue, interlocking}

3/30

- . . characterised by a layer formed with recesses or projections, e.g. {hollows, grooves, protuberances, ribs (apertured layer [B32B 3/266](#); layer with cavities or internal voids [B32B 3/26](#))}

- 3/08 . . characterised by added members at particular parts {(layer formed of separate pieces of material which are juxtaposed side-by-side [B32B 3/14](#), [B32B 3/18](#))}

- 3/085 . . . {spaced apart pieces on the surface of a layer}

- 5/00 Layered products characterised by the non-homogeneity or physical structure {, i.e. comprising a fibrous, filamentary, particulate or foam layer; Layered products characterised by having a layer differing constitutionally or physically in different parts}**
- NOTE**
- In this group, fibres, filaments, granules, or powder forming or included in a layer may be impregnated, bonded together, or embedded in a substance such as synthetic resin. If the substance of the fibres, or the like, or the impregnating, bonding, or embedding substance, is important it is classified in the relevant group for the substance.
- 5/02** . characterised by structural features of a {fibrous or filamentary layer ([B32B 15/02](#), [B32B 21/02](#) take precedence; layer formed of particles [B32B 5/16](#); layers formed of natural mineral fibres [B32B 19/00](#); coated or impregnated fibrous or filamentary layers [B32B 2255/02](#) or [B32B 2260/021](#))}
- NOTES**
1. This group covers, in addition to filamentary and fibrous layers as defined in Note (4) following the title of this subclass, layers of substances having an intrinsic fibrous nature (e.g. paper, wood), if the fibrous nature is important and the particular substance is not important.
  2. {When classifying in group [B32B 5/02](#), the chemical composition of the fibres is further classified by using the indexing codes [B32B 2262/00](#) - [B32B 2262/14](#), whenever appropriate.}
- 5/022** . . {Non-woven fabric}
- 5/024** . . {Woven fabric}
- 5/026** . . {Knitted fabric}
- 5/028** . . {Net structure, e.g. spaced apart filaments bonded at the crossing points}
- 5/04** . . characterised by a layer being specifically extensible by reason of its structure or arrangement {, e.g. by reason of the chemical nature of the fibres or filaments}
- 5/06** . . characterised by a fibrous {or filamentary} layer {mechanically connected, e.g. by needling, sewing, stitching, hydroentangling, hook and loop-type fasteners} to another layer, e.g. of fibres, of paper
- 5/08** . . the fibres or filaments of a layer being of different substances {, e.g. conjugate fibres, mixture of different fibres}
- 5/10** . . characterised by a fibrous {or filamentary} layer reinforced with filaments
- 5/12** . . characterised by the relative arrangement of fibres or filaments of {different layers, e.g. the fibres or filaments being parallel or perpendicular to each other}
- 5/14** . characterised by a layer differing constitutionally or physically in different parts, e.g. denser near its faces
- 5/142** . . {Variation across the area of the layer}
- 5/145** . . {Variation across the thickness of the layer}
- 5/147** . . {by treatment of the layer}
- 5/16** . characterised by features of a layer formed of particles, e.g. chips, powder {, granules ([B32B 21/02](#) takes precedence; layers formed of natural mineral particles [B32B 19/00](#); coated or impregnated particulate layers [B32B 2255/04](#) or [B32B 2260/025](#))}
- 5/18** . characterised by features of a layer {of} foamed material
- 5/20** . . foamed in situ
- 5/22** . characterised by the presence of two or more layers which {are next to each other and are fibrous, filamentary, formed of particles or foamed ([B32B 19/06](#), [B32B 19/048](#) [B32B 19/047](#), [B32B 29/005](#) - [B32B 29/04](#) take precedence)}
- 5/24** . . one layer being a fibrous or filamentary layer
- 5/245** . . . {another layer next to it being a foam layer}
- 5/26** . . . another layer {next to it also being fibrous or filamentary (relative arrangement of fibres or filaments of different layers [B32B 5/12](#); all layers being fibrous or filamentary [B32B 2250/20](#); two or more impregnated fibrous or filamentary layers [B32B 2260/023](#))}
- 5/28** . . . impregnated with or embedded in a plastic substance {(not used)}
- 5/30** . . one layer {being formed of particles, e.g. chips,} granules, powder
- 5/32** . . {at least two layers being foamed and next to each other (all layers being foamed [B32B 2250/22](#))}
- 7/00 Layered products characterised by the relation between layers; Layered products characterised by the relative orientation of features between layers, or by the relative values of a measurable parameter between layers, i.e. products comprising layers having different physical, chemical or physicochemical properties; Layered products characterised by the interconnection of layers**
- 7/02** . Physical, chemical or physicochemical properties
- WARNING**
- Group [B32B 7/02](#) is impacted by reclassification into groups [B32B 7/022](#), [B32B 7/023](#), [B32B 7/025](#), [B32B 7/027](#), and [B32B 7/028](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 7/022** . . Mechanical properties
- WARNING**
- Groups [B32B 7/022](#), [B32B 7/023](#), [B32B 7/025](#), [B32B 7/027](#), and [B32B 7/028](#) are incomplete pending reclassification of documents from group [B32B 7/02](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 7/023** . . Optical properties
- 7/025** . . Electric or magnetic properties
- 7/027** . . Thermal properties
- 7/028** . . . Heat-shrinkability

- 7/03 . with respect to the orientation of features ([direction of fibres or filaments B32B 5/12](#))

**WARNING**

Group [B32B 7/03](#) is impacted by reclassification into group [B32B 7/035](#).

Groups [B32B 7/03](#) and [B32B 7/035](#) should be considered in order to perform a complete search.

- 7/035 . . using arrangements of stretched films, e.g. of mono-axially stretched films arranged alternately

**WARNING**

Group [B32B 7/035](#) is incomplete pending reclassification of documents from group [B32B 7/03](#).

Groups [B32B 7/03](#) and [B32B 7/035](#) should be considered in order to perform a complete search.

- 7/04 . Interconnection of layers  
7/05 . . the layers not being connected over the whole surface, e.g. discontinuous connection or patterned connection ([using interposed adhesives or bonding materials applied in spaced arrangements B32B 7/14](#))  
7/06 . . permitting easy separation  
7/08 . . by mechanical means

**WARNING**

Group [B32B 7/08](#) is impacted by reclassification into group [B32B 7/09](#).

Groups [B32B 7/08](#) and [B32B 7/09](#) should be considered in order to perform a complete search.

- 7/09 . . . by stitching, needling or sewing ([by needling fibrous layers B32B 5/06](#))

**WARNING**

Group [B32B 7/09](#) is incomplete pending reclassification of documents from group [B32B 7/08](#).

Groups [B32B 7/08](#) and [B32B 7/09](#) should be considered in order to perform a complete search.

- 7/10 . . at least one layer having inter-reactive properties  
7/12 . . using interposed adhesives or interposed materials with bonding properties  
7/14 . . . applied in spaced arrangements, e.g. in stripes

**Layered products characterised by particular substances used****NOTE**

In groups [B32B 9/00](#) - [B32B 29/00](#), the following expressions are used with the meanings indicated:

- "specific substance" covers specified alternative substances if they are all covered by a single main group;
- "particulate layer" means a layer of particles, e.g. chips, chopped fibres, powder;

- {"essentially" means that if an alteration or removal of such a layer occurred it would alter the scope of the invention}

**9/00 Layered products comprising a particular substance not covered by groups [B32B 11/00](#) - [B32B 29/00](#)**

- 9/002 . {comprising natural stone or artificial stone}  
9/005 . {comprising one layer of ceramic material, e.g. porcelain, ceramic tile ([layered products with at least two ceramic layers composed mainly of ceramic B32B 18/00](#))}  
9/007 . . {comprising carbon, e.g. graphite, composite carbon}  
9/02 . comprising animal or vegetable substances {, e.g. cork, bamboo, starch}  
9/025 . . {comprising leather}  
9/04 . comprising such {particular substance as the main or only constituent of a layer, which is next to another layer of the same or of a different material ([B32B 17/06 takes precedence; layered products with at least two ceramic layers composed mainly of ceramic B32B 18/00](#))}  
9/041 . . {of metal}  
9/042 . . {of wood}  
9/043 . . {of natural rubber or synthetic rubber}  
9/045 . . {of synthetic resin}  
9/046 . . {of foam}  
9/047 . . {made of fibres or filaments}  
9/048 . . {made of particles}  
9/06 . . of paper or cardboard

**11/00 Layered products comprising {a layer of} bituminous or tarry substances**

- 11/02 . with fibres or particles {being present as additives in the layer}  
11/04 . comprising such {bituminous or tarry substance as the main or only constituent of a layer, which is next to another layer of the same or of a different material ([B32B 17/06 takes precedence](#))}  
11/042 . . {of wood}  
11/044 . . {of natural rubber or synthetic rubber}  
11/046 . . {of synthetic resin}  
11/048 . . {of foam}  
11/06 . . of paper or cardboard  
11/08 . . of metal  
11/10 . next to a fibrous or filamentary layer  
11/12 . next to a particulate layer

**13/00 Layered products comprising a {a layer of} water-setting substance, e.g. concrete, plaster, asbestos cement, or like builders' material**

- 13/02 . with fibres or particles {being present as additives in the layer}  
13/04 . comprising such {water setting substance as the main or only constituent of a layer, which is next to another layer of the same or of a different material ([B32B 17/06 takes precedence](#))}  
13/042 . . {of natural rubber or synthetic rubber}  
13/045 . . {of foam}  
13/047 . . {made of particles}  
13/06 . . of metal  
13/08 . . of paper or cardboard  
13/10 . . of wood; of wood particle board  
13/12 . . of synthetic resin

- 13/14 . . next to a fibrous or filamentary layer
- 15/00 Layered products comprising {a layer of} metal**
- 15/01 . . all layers being exclusively metallic {(making layered metal workpieces by pressure cladding [B23K 20/22](#); making coatings with a metallic material characterised by its composition [C23C 30/00](#))}
- 15/011 . . {all layers being formed of iron alloys or steels}
- 15/012 . . {one layer being formed of an iron alloy or steel, another layer being formed of aluminium or an aluminium alloy}
- 15/013 . . {one layer being formed of an iron alloy or steel, another layer being formed of a metal other than iron or aluminium}
- 15/015 . . . {the said other metal being copper or nickel or an alloy thereof}
- 15/016 . . {all layers being formed of aluminium or aluminium alloys}
- 15/017 . . {one layer being formed of aluminium or an aluminium alloy, another layer being formed of an alloy based on a non ferrous metal other than aluminium}
- 15/018 . . {one layer being formed of a noble metal or a noble metal alloy}
- 15/02 . . {Layer formed of wires, e.g. mesh}
- 15/04 . . comprising metal as the main or only constituent of a layer, {which is next to another layer of the same or of a different material ([B32B 17/061](#) and [B32B 23/042](#) take precedence; next to a bituminous or tarry layer [B32B 11/08](#); next to a water-setting substance layer [B32B 13/06](#))}
- 15/043 . . {of metal ([B32B 15/01](#) takes precedence)}
- 15/046 . . {of foam}
- 15/06 . . of {natural rubber or synthetic} rubber
- 15/08 . . of synthetic resin
- 15/082 . . . comprising vinyl resins; comprising acrylic resins
- 15/085 . . . comprising polyolefins
- 15/088 . . . comprising polyamides
- 15/09 . . . comprising polyesters
- 15/092 . . . comprising epoxy resins
- 15/095 . . . comprising polyurethanes
- 15/098 . . . comprising condensation resins of aldehydes, e.g. with phenols, ureas or melamines
- 15/10 . . of wood
- 15/12 . . of paper or cardboard
- 15/14 . . next to a fibrous or filamentary layer
- 15/16 . . next to a particulate layer
- 15/18 . . comprising iron or steel {([B32B 15/011](#), [B32B 15/012](#) and [B32B 15/013](#) take precedence)}
- 15/20 . . comprising aluminium or copper {([B32B 15/016](#) and [B32B 15/017](#) take precedence)}
- 17/00 Layered products essentially comprising sheet glass, or glass, slag, or like fibres**
- 17/02 . . in the form of fibres or filaments
- 17/04 . . bonded with or embedded in a plastic substance
- 17/06 . . comprising glass as the main or only constituent of a layer, next to another layer of a specific {material (coating on glass [C03C 17/00](#); safety glazings [B32B 17/08](#) or [B32B 17/10](#); fire protective glazing with intumescent layers [B32B 17/069](#))}
- 17/061 . . {metal}
- 17/062 . . {wood}
- 17/063 . . {rubber}
- 17/064 . . {synthetic resin ([B32B 17/10](#) takes precedence)}
- 17/065 . . {paper or cardboard}
- 17/066 . . {foam}
- 17/067 . . {fibres or filaments}
- 17/068 . . {particulate matter}
- 17/069 . . {intumescent layers ([B32B 17/10311](#) takes precedence)}
- 17/08 . . of cellulosic plastic substance {or gelatin}
- 17/10 . . of synthetic resin {(producing optical elements from plastics [B29D 11/00](#); constructional form of optical elements [G02B](#))}
- NOTES**
1. In this group a layer of organic glass is not considered as a glass layer but as a synthetic resin layer;
  2. [N: Inventions related to safety glazings (laminated glazings) are classified in all appropriate subgroups [B32B 17/10009](#) - [B32B 17/10807](#), whereby transparent polymeric layers other than the interlayer ([B32B 17/1055](#)) are classified using indexing codes
- 17/10009 . . . {characterized by the number, the constitution or treatment of glass sheets}
- 17/10018 . . . . {comprising only one glass sheet}
- 17/10027 . . . . {the glass sheet not being an outer layer}
- 17/10036 . . . . {comprising two outer glass sheet}
- 17/10045 . . . . {at least one intermediate layer consisting of a glass sheet}
- 17/10055 . . . . . {at least one intermediate air space (IG window units comprising two or more parallel glass panes [E06B 3/66](#))}
- 17/10064 . . . . {comprising at least two glass sheets, only one of which being an outer layer}
- 17/10073 . . . . {comprising at least two glass sheets, neither of which being an outer layer}
- 17/10082 . . . . {Properties of the bulk of a glass sheet}
- 17/10091 . . . . {thermally hardened ([chemical strengthening B32B 17/10137](#))}
- 17/101 . . . . {having a predetermined coefficient of thermal expansion [CTE]}
- 17/1011 . . . . {having predetermined tint or excitation purity}
- 17/10119 . . . . {having a composition deviating from the basic composition of soda-lime glass, e.g. borosilicate}
- 17/10128 . . . . {Treatment of at least one glass sheet (cutting of laminated glass [C03B 33/076](#))}
- 17/10137 . . . . . {Chemical strengthening}
- 17/10146 . . . . . {Face treatment, e.g. etching, grinding or sand blasting}
- 17/10155 . . . . . {Edge treatment, chamfering}
- 17/10165 . . . . {particular functional features of the laminated glazing}
- 17/10174 . . . . {Coatings of a metallic or dielectric material on a constituent layer of glass or polymer}
- 17/10183 . . . . . {being not continuous, e.g. in edge regions}
- 17/10192 . . . . . {patterned in the form of columns or grids}
- 17/10201 . . . . . {Dielectric coatings}



17/10211	. . . . .	{Doped dielectric layer, electrically conductive, e.g. SnO <sub>2</sub> :F}	17/10532	. . . . .	{suspended particle layer (devices for the control of the intensity of the light based on suspension of oriented dipolar particles <a href="#">G02F 1/172</a> )}
17/1022	. . . . .	{Metallic coatings}	17/10541	. . . . .	{the laminated glazing acting as an illumination device, i.e. comprising a light source or a light guide (lighting devices for vehicle interior <a href="#">B60Q 3/20</a> ; structural combinations of lighting devices with other articles <a href="#">F21V 33/00</a> ; light guides in general <a href="#">G02B 6/00</a> )}
17/10229	. . . . .	{Metallic layers sandwiched by dielectric layers}	17/1055	. . . . .	{characterized by the resin layer, i.e. interlayer}
17/10238	. . . . .	{in the form of particles}	17/10559	. . . . .	{Shape of the cross-section}
17/10247	. . . . .	{containing decorations or patterns for aesthetic reasons; metal wires for this purpose <a href="#">B32B 17/10422</a> }	17/10568	. . . . .	{varying in thickness}
17/10256	. . . . .	{created by printing techniques}	17/10577	. . . . .	{Surface roughness}
17/10266	. . . . .	{on glass pane}	17/10587	. . . . .	{created by embossing}
17/10275	. . . . .	{on interlayer}	17/10596	. . . . .	{created by melt fracture}
17/10284	. . . . .	{on intermediate layer}	17/10605	. . . . .	{Type of plasticizer}
17/10293	. . . . .	{Edge features, e.g. inserts or holes}	17/10614	. . . . .	{comprising particulate matter for purposes other than dyeing}
17/10302	. . . . .	{Edge sealing}	17/10623	. . . . .	{Whitening agents reflecting visible light}
17/10311	. . . . .	{Intumescent layers for fire protection}	17/10633	. . . . .	{Infrared radiation absorbing or reflecting agents}
17/10321	. . . . .	{containing liquid layers}	17/10642	. . . . .	{Thermally conductive agents}
17/1033	. . . . .	{containing temporary protective coatings or layers}	17/10651	. . . . .	{comprising colorants, e.g. dyes or pigments}
17/10339	. . . . .	{Specific parts of the laminated glazing being colored or tinted (tinted glass <a href="#">B32B 17/1011</a> ; tinted interlayer <a href="#">B32B 17/10651</a> )}	17/1066	. . . . .	{imparting a tint in certain regions only, i.e. shade band}
17/10348	. . . . .	{comprising an obscuration band}	17/10669	. . . . .	{Luminescent agents (luminescent materials <a href="#">C09K 11/00</a> , optical brightening agents <a href="#">C08K 5/0041</a> )}
17/10357	. . . . .	{comprising a tinted intermediate film}	17/10678	. . . . .	{comprising UV absorbers or stabilizers, e.g. antioxidants}
17/10366	. . . . .	{Reinforcements of the laminated glazing against impact or intrusion; metal wires for this purpose <a href="#">B32B 17/10412</a> }	17/10688	. . . . .	{Adjustment of the adherence to the glass layers}
17/10376	. . . . .	{containing metal wires}	17/10697	. . . . .	{being cross-linked}
17/10385	. . . . .	{for Ohmic resistance heating (Ohmic resistance heating in general <a href="#">H05B 3/84</a> )}	17/10706	. . . . .	{being photo-polymerized}
17/10394	. . . . .	{Alarm wires (burglar alarms by breaking glass <a href="#">G08B 13/04</a> )}	17/10715	. . . . .	{containing polyether}
17/10403	. . . . .	{for radiation shielding (radiation shielding in general <a href="#">H05K 9/00</a> )}	17/10724	. . . . .	{containing polyamide}
17/10412	. . . . .	{for reinforcement}	17/10733	. . . . .	{containing epoxy}
17/10422	. . . . .	{for aesthetic reasons}	17/10743	. . . . .	{containing acrylate (co)polymers or salts thereof}
17/10431	. . . . .	{Devices for the modulation of light incorporated into the laminated glazing (metallic or dielectric coatings <a href="#">B32B 17/10174</a> ; coating on glass in general <a href="#">C03C 17/00</a> )}	17/10752	. . . . .	{containing polycarbonate}
17/1044	. . . . .	{Invariable transmission}	17/10761	. . . . .	{containing vinyl acetate}
17/10449	. . . . .	{Wavelength selective transmission (filters <a href="#">per se</a> <a href="#">G02B 5/20</a> )}	17/1077	. . . . .	{containing polyurethane}
17/10458	. . . . .	{Polarization selective transmission (polarizing elements <a href="#">per se</a> <a href="#">G02B 5/30</a> )}	17/10779	. . . . .	{containing polyester}
17/10467	. . . . .	{Variable transmission}	17/10788	. . . . .	{containing ethylene vinylacetate}
17/10477	. . . . .	{thermochromic}	17/10798	. . . . .	{containing silicone}
17/10486	. . . . .	{photochromic}	17/10807	. . . . .	{Making layered products containing glass and synthetic resin layers; apparatus therefor}
17/10495	. . . . .	{optoelectronic, i.e. optical valve}	17/10816	. . . . .	{by pressing}
17/10504	. . . . .	{liquid crystal layer (devices for the control of the intensity of the light based on liquid crystals <a href="#">G02F 1/13</a> )}	17/10825	. . . . .	{isostatic pressing, i.e. using non rigid pressure-exerting members against rigid parts (isostatic presses in general <a href="#">B30B 11/001</a> )}
17/10513	. . . . .	{electrochromic layer (devices for the control of the intensity of the light based on electrochromic elements <a href="#">G02F 1/15</a> )}	17/10834	. . . . .	{using a fluid}
17/10522	. . . . .	{electrophoretic layer (devices for the control of the intensity of the light based on electrophoresis <a href="#">G02F 1/167</a> )}	17/10844	. . . . .	{using a membrane between the layered product and the fluid}
			17/10853	. . . . .	{the membrane being bag-shaped}
			17/10862	. . . . .	{using pressing-rolls}
			17/10871	. . . . .	{in combination with particular heat treatment}

- 17/1088 . . . . {by superposing a plurality of layered products}
- 17/10889 . . . . {shaping the sheets, e.g. by using a mould (B32B 17/10816 takes precedence)}
- 17/10899 . . . . {by introducing interlayers of synthetic resin}
- 17/10908 . . . . . {in liquid form}
- 17/10917 . . . . . {between two pre-positioned glass layers (spacing elements for window units comprising two or more parallel panes E06B 3/663)}
- 17/10926 . . . . . {by spraying (spraying in general B05)}
- 17/10935 . . . . . {as a preformed layer, e.g. formed by extrusion}
- 17/10944 . . . . . {in powder form}
- 17/10954 . . . . . {by using an aligning laminating device}
- 17/10963 . . . . {specially adapted for repairing the layered products}
- 17/10972 . . . . {Degassing during the lamination (B32B 17/10816 takes precedence; during molding B29C 37/006)}
- 17/10981 . . . . {Pre-treatment of the layers}
- 17/1099 . . . . {After-treatment of the layered product, e.g. cooling}
- 18/00 Layered products essentially comprising ceramics, e.g. refractory products**
- NOTE**
- In group B32B 18/00, from 01-10-2008 onwards, features relating to interlayers, additional compositional information or further processing are indexed with codes chosen from C04B 2237/00 - C04B 2237/88
- 19/00 Layered products comprising {a layer of} natural mineral fibres or particles, e.g. asbestos, mica**
- 19/02 . {the layer of fibres or particles being impregnated or} embedded in a plastic substance
- 19/04 . next to another layer {of the same or of a different material (B32B 17/067 takes precedence)}
- 19/041 . . {of metal}
- 19/042 . . {of wood}
- 19/043 . . {of natural rubber or synthetic rubber}
- 19/045 . . {of synthetic resin}
- 19/046 . . {of paper or cardboard}
- 19/047 . . {of foam}
- 19/048 . . {made of particles}
- 19/06 . next to a fibrous or filamentary layer
- 19/08 . comprising asbestos
- 21/00 Layered products comprising {a layer of} wood, e.g. wood board, veneer, wood particle board**
- 21/02 . {the layer being formed} of fibres, chips, or particles {, e.g. MDF, HDF, OSB, chipboard, particle board, hardboard}
- 21/04 . comprising wood as the main or only constituent of a layer {, which is next to another layer of the same or of a different material (B32B 17/062 and B32B 23/044 take precedence; next to a layer of a particular substance B32B 9/042; next to a bituminous or tarry layer B32B 11/042; next to a water setting substance layer B32B 13/10; next to a metal layer B32B 15/10; next to a layer formed of natural mineral fibres or particles B32B 19/042)}
- 21/042 . . {of wood (B32B 21/13 takes precedence)}
- 21/045 . . {of natural rubber or synthetic rubber}
- 21/047 . . {of foam}
- 21/06 . . of paper or cardboard
- 21/08 . . of synthetic resin
- 21/10 . Next to a fibrous or filamentary layer
- 21/12 . next to a particulate layer
- 21/13 . all layers being exclusively wood
- 21/14 . comprising wood board or veneer
- 23/00 Layered products comprising {a layer of} cellulosic plastic substances {, i.e. substances obtained by chemical modification of cellulose, e.g. cellulose ethers, cellulose esters, viscose}**
- 23/02 . in the form of fibres or filaments {(not used)}
- 23/04 . comprising such {cellulosic plastic substance as the main or only constituent of a layer, which is next to another layer of the same or of a different material (B32B 17/08 takes precedence)}
- 23/042 . . {of metal}
- 23/044 . . {of wood}
- 23/046 . . {of natural rubber or synthetic rubber (all layers being polymeric B32B 2250/24)}
- 23/048 . . {of foam}
- 23/06 . . of paper or cardboard
- 23/08 . . of synthetic resin {(all layers being polymeric B32B 2250/24)}
- 23/10 . next to a fibrous or filamentary layer
- 23/12 . next to a particulate layer
- 23/14 . characterised by containing special compounding ingredients
- 23/16 . . Modifying agents
- 23/18 . . Fillers
- 23/20 . comprising esters
- 23/22 . comprising ethers
- 25/00 Layered products comprising {a layer of} natural or synthetic rubber {(B32B 5/02, B32B 5/16, B32B 5/18 take precedence; thermoplastic elastomer B32B 2274/00)}**
- 25/02 . with fibres or particles {being present as additives in the layer}
- 25/04 . comprising rubber as the main or only constituent of a layer, {which is next to another layer of the same or of a different material (B32B 17/063 takes precedence; next to a layer of a particular substance B32B 9/043; next to a bituminous or tarry layer B32B 11/044; next to a water setting substance layer B32B 13/042; next to a metal layer B32B 15/06; next to a layer formed of natural mineral fibres or particles B32B 19/043; next to a wood layer B32B 21/045; next to a cellulosic plastic layer B32B 23/046)}
- 25/042 . . {of natural rubber or synthetic rubber (all layers being made of natural or synthetic rubber B32B 2250/248)}
- 25/045 . . {of foam}
- 25/047 . . {of particles}
- 25/06 . . of paper or cardboard
- 25/08 . . of synthetic resin {(all layers being polymeric B32B 2250/24)}
- 25/10 . next to a fibrous or filamentary layer
- 25/12 . comprising natural rubber

- 25/14 . comprising {synthetic rubber copolymers ([B32B 25/18](#) and [B32B 25/20](#) take precedence)}
- 25/16 . comprising polydienes {homopolymers} or polyhalodienes {homopolymers ([B32B 25/12](#) takes precedence)}
- 25/18 . comprising butyl or halobutyl rubber
- 25/20 . comprising silicone rubber
- 27/00 Layered products comprising {a layer of} synthetic resin {([B32B 5/02](#), [B32B 5/16](#), [B32B 5/18](#) take precedence; thermoplastic elastomer [B32B 2274/00](#))}**  
**NOTE**  
This group covers all synthetic resins except those covered by [B32B 25/00](#) or [B32B 23/00](#)
- 27/02 . in the form of fibres or filaments {(not used)}
- 27/04 . as impregnant, bonding, or embedding substance {(not used)}
- 27/06 . as the main or only constituent of a layer, {which is next to another layer of the same or of a different material ([B32B 17/064](#) takes precedence; next to a layer of a particular substance [B32B 9/045](#); next to a bituminous or tarry layer [B32B 11/046](#); next to a water setting substance layer [B32B 13/12](#); next to a metal layer [B32B 15/08](#); next to a layer formed of natural mineral fibres or particles [B32B 19/045](#); next to a wood layer [B32B 21/08](#); next to a cellulosic plastic layer [B32B 23/08](#); next to a natural or synthetic rubber layer [B32B 25/08](#))}
- 27/065 . . {of foam}
- 27/08 . . of synthetic resin {(all layers being polymeric, made of polymers belonging to those covered by [B32B 27/32](#), by [B32B 27/36](#), or by [B32B 27/30](#) and [B32B 27/32](#), [B32B 2250/24](#) - [B32B 2250/246](#))}
- 27/10 . . of paper or cardboard
- 27/12 . next to a fibrous or filamentary layer
- 27/14 . next to a particulate layer
- 27/16 . specially treated, e.g. irradiated {([B32B 2255/10](#) takes precedence)}
- 27/18 . characterised by the use of special additives
- 27/20 . . using fillers, pigments, thixotroping agents
- 27/205 . . . {the fillers creating voids or cavities, e.g. by stretching}
- 27/22 . . using plasticisers
- 27/24 . . using solvents or swelling agents
- 27/26 . . using curing agents
- 27/28 . comprising synthetic resins not wholly covered by any one of the sub-groups {[B32B 27/30](#) - [B32B 27/42](#)}
- 27/281 . . {comprising polyimides}
- 27/283 . . {comprising polysiloxanes}
- 27/285 . . {comprising polyethers}
- 27/286 . . {comprising polysulphones; polysulfides}
- 27/288 . . {comprising polyketones}
- 27/30 . comprising vinyl {(co)polymers; comprising acrylic (co)polymers}
- 27/302 . . {comprising aromatic vinyl (co)polymers, e.g. styrenic (co)polymers}
- 27/304 . . {comprising vinyl halide (co)polymers, e.g. PVC, PVDC, PVF, PVDF}
- 27/306 . . {comprising vinyl acetate or vinyl alcohol (co)polymers}
- 27/308 . . {comprising acrylic (co)polymers}

- 27/32 . comprising polyolefins {([B32B 27/30](#) takes precedence)}
- 27/322 . . {comprising halogenated polyolefins, e.g. PTFE}
- 27/325 . . {comprising polycycloolefins}
- 27/327 . . {comprising polyolefins obtained by a metallocene or single-site catalyst}
- 27/34 . comprising polyamides
- 27/36 . comprising polyesters
- 27/365 . . {comprising polycarbonates}
- 27/38 . comprising epoxy resins
- 27/40 . comprising polyurethanes
- 27/42 . comprising condensation resins of aldehydes, e.g. with phenols, ureas or melamines

### **29/00 Layered products comprising {a layer of} paper or cardboard**

- 29/002 . {as the main or only constituent of a layer, which is next to another layer of the same or of a different material ([B32B 17/065](#) takes precedence; next to a layer of a particular substance [B32B 9/06](#); next to a bituminous or tarry layer [B32B 11/06](#); next to a water-setting substance layer [B32B 13/08](#); next to a metal layer [B32B 15/12](#); next to a layer formed of natural mineral fibres or particles [B32B 19/046](#); next to a wood layer [B32B 21/06](#); next to a cellulosic plastic layer [B32B 23/06](#); next to a natural or synthetic rubber layer [B32B 25/06](#); next to a synthetic resin layer [B32B 27/10](#))}
- 29/005 . . {next to another layer of paper or cardboard layer (all layers being made of paper or paperboard [B32B 2250/26](#))}
- 29/007 . . {next to a foam layer}
- 29/02 . next to a fibrous or filamentary layer
- 29/04 . next to a particulate layer
- 29/06 . specially treated, e.g. surfaced, parchmentised {([B32B 2255/12](#), [B32B 2260/028](#) take precedence)}
- 29/08 . Corrugated paper or cardboard

### **33/00 Layered products characterised by particular properties or particular surface features, e.g. particular surface coatings (surface unevennesses or non-uniformities [B32B 3/00](#)); Layered products designed for particular purposes not covered by another single class**

#### **WARNING**

Group [B32B 33/00](#) is incomplete pending reclassification of documents from group [B29D 2009/00](#).

Groups [B29D 2009/00](#) and [B32B 33/00](#) should be considered in order to perform a complete search.

### **Methods or apparatus for making layered products; Treatment of the layers or of the layered products**

#### **NOTE**

In groups [B32B 37/00](#){ , [B32B 38/00](#), [B32B 41/00](#)} and [B32B 39/00](#), the following expressions are used with the meaning indicated:

- {"lay-up" is considered to be the action of combining separate layers, one on top of the other, in order to form a half-product for entering the laminating process}
- "laminating" means the action of combining previously unconnected {but possibly laid up} layers to become one product whose layers will remain together;



- "partial laminating" occurs when one layer does not fully cover a surface of another layer, whereby the layer with the greater surface area is laminated on only part of its surface;
  - "adhesive" means a layer, or part of a layer, applied in any state or in any manner which is incorporated for the purpose of bonding.
- 37/00 Methods or apparatus for laminating, e.g. by curing or by ultrasonic bonding**
- 37/0007 . {involving treatment or provisions in order to avoid deformation or air inclusion, e.g. to improve surface quality}
- 37/0015 . . {to avoid warp or curl}
- 37/0023 . . {around holes, apertures or channels present in at least one layer}
- 37/003 . . {to avoid air inclusion}
- 37/0038 . {involving application of liquid to the layers prior to lamination, e.g. wet laminating (B32B 37/12 takes precedence)}
- 37/0046 . {characterised by constructional aspects of the apparatus}
- 37/0053 . . {Constructional details of laminating machines comprising rollers; Constructional features of the rollers}
- 2037/0061 . . {the apparatus being an office laminator}
- 2037/0069 . . {the apparatus being originally designed for another function, e.g. printer, photocopier}
- 37/0076 . {characterised in that the layers are not bonded on the totality of their surfaces}
- 37/0084 . . {Point bonding}
- 2037/0092 . {in which absence of adhesives is explicitly presented as an advantage}
- 37/02 . characterised by a sequence of laminating steps, e.g. by adding new layers at consecutive laminating stations
- 37/025 . . {Transfer laminating}
- 37/04 . characterised by the partial melting of at least one layer
- 37/06 . characterised by the heating method
- 37/065 . . {resulting in the laminate being partially bonded (B32B 37/0076 takes precedence)}
- 37/08 . characterised by the cooling method
- 37/085 . . {Quenching}
- 37/10 . characterised by the pressing technique, e.g. using action of vacuum or fluid pressure
- 37/1009 . . {using vacuum and fluid pressure}
- 37/1018 . . {using only vacuum}
- 37/1027 . . {Pressing using at least one press band}
- 37/1036 . . . {Pressing between one press band and a cylinder}
- 37/1045 . . {Intermittent pressing, e.g. by oscillating or reciprocating motion of the pressing means (B32B 37/0076 takes precedence)}
- 37/1054 . . {Regulating the dimensions of the laminate, e.g. by adjusting the nip or platen gap}
- 2037/1063 . . {using an electrostatic force}
- 2037/1072 . . {using a fluid jet}
- 2037/1081 . . {using a magnetic force}
- 2037/109 . . {using a squeegee}
- 37/12 . characterised by using adhesives
- 37/1207 . . {Heat-activated adhesive (laminating by the partial melting of layers to form the bond B32B 37/04 takes precedence)}
- 2037/1215 . . . {Hot-melt adhesive}
- 2037/1223 . . . . {film-shaped}
- 2037/123 . . . . {net-shaped}
- 2037/1238 . . . {in the form of powder}
- 2037/1246 . . {Other adhesives (not used)}
- 2037/1253 . . . {curable}
- 2037/1261 . . . . {moisture curable}
- 2037/1269 . . . {multi-component adhesive}
- 2037/1276 . . . {water-based adhesive}
- 37/1284 . . {Application of adhesive}
- 37/1292 . . . {selectively, e.g. in stripes, in patterns (B32B 37/0076 takes precedence)}
- 37/14 . characterised by the properties of the layers
- 37/142 . . {Laminating of sheets, panels or inserts, e.g. stiffeners, by wrapping in at least one outer layer, or inserting into a preformed pocket}
- 37/144 . . {using layers with different mechanical or chemical conditions or properties, e.g. layers with different thermal shrinkage, layers under tension during bonding (constructional features for tensioning B32B 38/1825 takes precedence)}
- 37/146 . . {whereby one or more of the layers is a honeycomb structure}
- 2037/148 . . {whereby layers material is selected in order to facilitate recycling of the laminate}
- 37/15 . . with at least one layer being manufactured and immediately laminated before reaching its stable state, e.g. in which a layer is extruded and laminated while in semi-molten state
- 37/153 . . . {at least one layer is extruded and immediately laminated while in semi-molten state}
- 37/156 . . . {at least one layer is calendered and immediately laminated}
- 37/16 . . with all layers existing as coherent layers before laminating
- 37/18 . . . involving the assembly of discrete sheets or panels only
- 37/182 . . . . {one or more of the layers being plastic}
- 37/185 . . . . {Laminating sheets, panels or inserts between two discrete plastic layers}
- 37/187 . . . . {the layers being placed in a carrier before going through the lamination process}
- 37/20 . . . involving the assembly of continuous webs only
- 37/203 . . . . {One or more of the layers being plastic}
- 37/206 . . . . {Laminating a continuous layer between two continuous plastic layers}
- 37/22 . . . involving the assembly of both discrete and continuous layers
- 37/223 . . . . {One or more of the layers being plastic}
- 37/226 . . . . {Laminating sheets, panels or inserts between two continuous plastic layers}
- 37/24 . . with at least one layer not being coherent before laminating, e.g. made up from granular material sprinkled onto a substrate (B32B 37/15 takes precedence)
- 2037/243 . . . {Coating}
- 2037/246 . . . {Vapour deposition}
- 37/26 . . with at least one layer which influences the bonding during the lamination process, e.g. release layers or pressure equalising layers
- 2037/262 . . . {Partition plates or sheets for separating several laminates pressed simultaneously}
- 2037/264 . . . {Pressure equalizing layers}
- 2037/266 . . . {Cushioning layers}

2037/268	. . . {Release layers}	2038/008	. . {Sewing, stitching}
37/28	. involving assembly of non-flat intermediate products which are flattened at a later step, e.g. tubes	2038/0084	. . {Foaming}
37/30	. Partial laminating	2038/0088	. . {Expanding, swelling}
<b>38/00</b>	<b>Ancillary operations in connection with laminating processes</b>	2038/0092	. . {Metallizing}
	<b>NOTE</b>	2038/0096	. . {Riveting}
	{In this group, the following expression is used with the meaning indicated:	38/04	. Punching, slitting or perforating
	. "in connection with laminating processes" means ancillary operations are carried out either	<b>NOTE</b>	
	a. as steps of the lamination processes, or		When classifying in group <a href="#">B32B 38/04</a> , the operation can be further indexed by using the indexing codes chosen from <a href="#">B32B 38/04</a> and subgroups
	b. in line with the lamination processes, just before or immediately after.}	2038/042	. . {Punching}
38/0004	. {Cutting, tearing or severing, e.g. bursting; Cutter details (cutting in general <a href="#">B26D</a> ; laminating combined with punching or perforating <a href="#">B32B 38/04</a> ; removing all or part of the layers <a href="#">B32B 38/10</a> ; cutting in combination with laying up and registration <a href="#">B32B 38/185</a> takes precedence)}	2038/045	. . {Slitting}
38/0008	. {Electrical discharge treatment, e.g. corona, plasma treatment; wave energy or particle radiation ( <a href="#">B32B 38/0036</a> and <a href="#">B29C 59/00</a> take precedence)}	2038/047	. . {Perforating}
	<b>NOTE</b>	38/06	. Embossing
	Laminate treatment is further indexed in group <a href="#">B32B 2310/00</a>	38/08	. Impregnating
38/0012	. {Mechanical treatment, e.g. roughening, deforming, stretching}	38/10	. Removing layers, or parts of layers, mechanically or chemically (punching, slitting or perforating <a href="#">B32B 38/04</a> )
	<b>NOTE</b>	38/105	. . {on edges}
	When classifying in group <a href="#">B32B 38/0012</a> , the treatment can be further classified into indexing codes chosen from <a href="#">B32B 2038/0016</a> - <a href="#">B32B 2038/0028</a>	38/12	. Deep-drawing
2038/0016	. . {Abrading}	38/14	. Printing or colouring
2038/002	. . {Sandblasting}	38/145	. . {Printing}
2038/0024	. . {Crushing}	38/16	. Drying; Softening; Cleaning
2038/0028	. . {Stretching, elongating}	38/162	. . {Cleaning}
38/0032	. {increasing porosity ( <a href="#">B32B 38/04</a> takes precedence)}	38/164	. . {Drying}
38/0036	. {Heat treatment (for heating or cooling of layers during lamination <a href="#">B32B 37/06</a> , <a href="#">B32B 37/08</a> )}	<b>NOTE</b>	
	<b>NOTE</b>		When classifying in group <a href="#">B32B 38/164</a> , the drying operation can be further indexed by using the indexing codes chosen from <a href="#">B32B 38/164</a> and subgroups
	When classifying in group <a href="#">B32B 38/0036</a> , the heat treatment can be further indexed by using the indexing codes chosen from <a href="#">B32B 38/0036</a> and subgroups	2038/166	. . . {Removing moisture}
38/004	. . {by physically contacting the layers, e.g. by the use of heated platens or rollers}	2038/168	. . . {Removing solvent}
2038/0044	. . {for creating local stresses}	38/18	. Handling of layers or the laminate
2038/0048	. . {Annealing, relaxing}	38/1808	. . {characterised by the laying up of the layers}
2038/0052	. {Other operations not otherwise provided for}	38/1816	. . . {Cross feeding of one or more of the layers}
2038/0056	. . {Moistening}	38/1825	. . {characterised by the control or constructional features of devices for tensioning, stretching or registration}
2038/006	. . {Relieving internal or residual stresses}	38/1833	. . . {Positioning, e.g. registration or centering}
2038/0064	. . {Smoothing, polishing, making a glossy surface}	38/1841	. . . . {during laying up}
2038/0068	. . {Changing crystal orientation}	38/185	. . . . . {combined with the cutting of one or more layers}
2038/0072	. . {Orienting fibers}	38/1858	. . {using vacuum}
2038/0076	. . {Curing, vulcanising, cross-linking}	38/1866	. . {conforming the layers or laminate to a convex or concave profile}
		38/1875	. . {Tensioning}
		38/1883	. . {Detensioning}
		2038/1891	. . {Using a robot for handling the layers}
		<b>39/00</b>	<b>Layout of apparatus or plants, e.g. modular laminating systems</b>
		<b>41/00</b>	<b>Arrangements for controlling or monitoring lamination processes; Safety arrangements</b>
		41/02	. Safety arrangements
		2041/04	. {Detecting wrong registration, misalignment, deviation, failure}
		2041/06	. {Starting the lamination machine or method}

<b>43/00</b>	<b>Operations specially adapted for layered products and not otherwise provided for, e.g. repairing; Apparatus therefor</b>	<b>2260/021</b>	. . Fibrous or filamentary layer (layers of natural mineral fibres or particles being impregnated in a plastic substance <a href="#">B32B 19/02</a> )
43/003	. {Cutting}	<b>2260/023</b>	. . . Two or more layers
43/006	. {Delaminating}	<b>2260/025</b>	. . Particulate layer (layers of natural mineral fibres or particles being impregnated in a plastic substance <a href="#">B32B 19/02</a> )
<hr/>		<b>2260/026</b>	. . Wood layer
<b>2250/00</b>	<b>Layers arrangement</b>	<b>2260/028</b>	. . Paper layer
2250/02	. 2 layers	<b>2260/04</b>	. Impregnation material
2250/03	. 3 layers	<b>2260/042</b>	. . Bituminous or tarry substance
2250/04	. 4 layers	<b>2260/044</b>	. . Water-setting substance, e.g. concrete, plaster
2250/05	. 5 or more layers	<b>2260/046</b>	. . Synthetic resin
2250/20	. All layers being fibrous or filamentary	<b>2260/048</b>	. . Natural or synthetic rubber
2250/22	. All layers being foamed	<b>2262/00</b>	<b>Composition of fibres which form a fibrous or filamentary layer or are present as additives</b>
2250/24	. All layers being polymeric	<b>2262/02</b>	. Synthetic macromolecular fibres
2250/242	. . All polymers belonging to those covered by group <a href="#">B32B 27/32</a>	<b>2262/0207</b>	. . Elastomeric fibres
2250/244	. . All polymers belonging to those covered by group <a href="#">B32B 27/36</a>	<b>2262/0215</b>	. . . Thermoplastic elastomer fibers
2250/246	. . All polymers belonging to those covered by groups <a href="#">B32B 27/32</a> and <a href="#">B32B 27/30</a>	<b>2262/0223</b>	. . Vinyl resin fibres
2250/248	. . All polymers belonging to those covered by group <a href="#">B32B 25/00</a>	<b>2262/023</b>	. . . Aromatic vinyl resin, e.g. styrenic (co)polymers
2250/26	. All layers being made of paper or paperboard	<b>2262/0238</b>	. . . Vinyl halide, e.g. PVC, PVDC, PVF, PVDF
2250/40	. Symmetrical or sandwich layers, e.g. ABA, ABCBA, ABCCBA	<b>2262/0246</b>	. . Acrylic resin fibres
2250/42	. Alternating layers, e.g. ABAB(C), AABBAABB(C)	<b>2262/0253</b>	. . Polyolefin fibres (vinyl or acrylic copolymers <a href="#">B32B 2262/0223</a> or <a href="#">B32B 2262/0246</a> )
2250/44	. Number of layers variable across the laminate	<b>2262/0261</b>	. . Polyamide fibres
<b>Layer arrangements; Coating, impregnation or embedding of layers; Composition of fibres, particles or foam present on a layer; Resin or rubber layer containing a blend of polymers or recycled material</b>		<b>2262/0269</b>	. . . Aromatic polyamide fibres
<b>2255/00</b>	<b>Coating on the layer surface</b>	<b>2262/0276</b>	. . Polyester fibres
	<b>NOTE</b>	<b>2262/0284</b>	. . . Polyethylene terephthalate [PET] or polybutylene terephthalate [PBT]
	This group is for classification of coatings on a layered product. Specific details of coatings or processes thereof can be found in <a href="#">C08J 7/00</a> , <a href="#">B05D</a> , <a href="#">C09D</a> , <a href="#">C09J</a> , <a href="#">C23C</a> or <a href="#">D06M</a> .	<b>2262/0292</b>	. . Polyurethane fibres
2255/02	. on fibrous or filamentary layer	<b>2262/04</b>	. Cellulosic plastic fibres, e.g. rayon
2255/04	. on a particulate layer	<b>2262/06</b>	. Vegetal fibres
2255/06	. on metal layer	<b>2262/062</b>	. . Cellulose fibres, e.g. cotton
2255/062	. . metal layer being a foamed layer	<b>2262/065</b>	. . . Lignocellulosic fibres, e.g. jute, sisal, hemp, flax, bamboo
2255/08	. on wood layer	<b>2262/067</b>	. . . Wood fibres
2255/10	. on synthetic resin layer or on natural or synthetic rubber layer	<b>2262/08</b>	. Animal fibres, e.g. hair, wool, silk
2255/102	. . synthetic resin or rubber layer being a foamed layer	<b>2262/10</b>	. Inorganic fibres (layered products comprising a layer of natural mineral fibres <a href="#">B32B 19/00</a> )
2255/12	. on paper layer	<b>2262/101</b>	. . Glass fibres
2255/20	. Inorganic coating	<b>2262/103</b>	. . Metal fibres
2255/205	. . Metallic coating	<b>2262/105</b>	. . Ceramic fibres
2255/24	. Organic non-macromolecular coating	<b>2262/106</b>	. . Carbon fibres, e.g. graphite fibres
2255/26	. Polymeric coating	<b>2262/108</b>	. . Rockwool fibres
2255/28	. Multiple coating on one surface	<b>2262/12</b>	. Conjugate fibres, e.g. core/sheath, side-by-side
<b>2260/00</b>	<b>Impregnation or embedding of a layer; Bonding a fibrous, filamentary or particulate layer by using a binder</b>	<b>2262/14</b>	. Mixture of at least two fibres made of different materials
2260/02	. Composition of the impregnated, bonded or embedded layer	<b>2264/00</b>	<b>Composition of particles which form a particulate layer or are present as additives</b>
		<b>2264/02</b>	. Synthetic macromolecular particles
		<b>2264/0207</b>	. . Particles made of materials belonging to <a href="#">B32B 25/00</a>
		<b>2264/0214</b>	. . Particles made of materials belonging to <a href="#">B32B 27/00</a>
		<b>2264/0221</b>	. . . Thermoplastic elastomer particles
		<b>2264/0228</b>	. . . Vinyl resin particles
		<b>2264/0235</b>	. . . Aromatic vinyl resin, e.g. styrenic (co)polymers
		<b>2264/0242</b>	. . . . Vinyl halide, e.g. PVC, PVDC, PVF, PVDF

- 2264/025 . . . Acrylic resin particles
- 2264/0257 . . . Polyolefin particles ([vinyl or acrylic copolymers B32B 2264/0228, B32B 2264/025](#))
- 2264/0264 . . . Polyamide particles
- 2264/0271 . . . Aromatic polyamide particles
- 2264/0278 . . . Polyester particles
- 2264/0285 . . . PET or PBT
- 2264/0292 . . . Polyurethane particles
- 2264/04 . . Cellulosic particles, e.g. rayon
- 2264/06 . . Vegetal particles
- 2264/062 . . Cellulose particles, e.g. cotton
- 2264/065 . . Lignocellulosic particles, e.g. jute, sisal, hemp, flax, bamboo
- 2264/067 . . . Wood particles
- 2264/08 . . Animal particles, e.g. leather
- 2264/10 . . Inorganic particles ([layered products comprising a layer of natural mineral particles B32B 19/00](#))
- 2264/101 . . Glass particles
- 2264/102 . . Oxide or hydroxide particles, e.g. silica particles, TiO<sub>2</sub> particles
- 2264/104 . . Oxy salt particles, e.g. carbonate, sulfate, phosphate or nitrate particles
- 2264/105 . . Metal particles
- 2264/107 . . Ceramic particles
- 2264/108 . . . Carbon particles, e.g. graphite particles
- 2264/12 . . Mixture of at least two particles made of different materials

#### 2266/00 Composition of foam

##### WARNING

Group [B32B 2266/00](#) is impacted by reclassification into groups [B32B 2266/10](#), [B32B 2266/102](#), [B32B 2266/104](#), [B32B 2266/106](#), [B32B 2266/108](#), [B32B 2266/12](#), [B32B 2266/122](#), [B32B 2266/124](#), [B32B 2266/126](#), [B32B 2266/128](#), and [B32B 2266/14](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 2266/02 . . Organic

##### WARNING

Group [B32B 2266/02](#) is impacted by reclassification into group [B32B 2266/031](#).

Groups [B32B 2266/02](#) and [B32B 2266/031](#) should be considered in order to perform a complete search.

- 2266/0207 . . Materials belonging to [B32B 25/00](#)
- 2266/0214 . . Materials belonging to [B32B 27/00](#)
- 2266/0221 . . . Vinyl resin
- 2266/0228 . . . Aromatic vinyl resin, e.g. styrenic (co)polymers
- 2266/0235 . . . Vinyl halide, e.g. PVC, PVDC, PVF, PVDF
- 2266/0242 . . . Acrylic resin
- 2266/025 . . . Polyolefin ([vinyl or acrylic copolymers B32B 2266/0221, B32B 2266/0242](#))
- 2266/0257 . . . Polyamide
- 2266/0264 . . . Polyester
- 2266/0271 . . . Epoxy resin
- 2266/0278 . . . Polyurethane
- 2266/0285 . . . Condensation resins of aldehydes, e.g. with phenols, ureas, melamines

- 2266/0292 . . . Thermoplastic elastomer
- 2266/031 . . Bituminous or tarry material

##### WARNING

Group [B32B 2266/031](#) is incomplete pending reclassification of documents from group [B32B 2266/02](#).

Groups [B32B 2266/031](#) and [B32B 2266/02](#) should be considered in order to perform a complete search.

- 2266/04 . . Inorganic

##### WARNING

Group [B32B 2266/04](#) is impacted by reclassification into groups [B32B 2266/049](#), [B32B 2266/053](#), and [B32B 2266/057](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 2266/045 . . Metal
- 2266/049 . . Water-setting material, e.g. concrete, plaster or asbestos cement

##### WARNING

Groups [B32B 2266/049](#), [B32B 2266/053](#), and [B32B 2266/057](#) are incomplete pending reclassification of documents from [B32B 2266/04](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 2266/053 . . Mineral element, e.g. asbestos or mica
- 2266/057 . . Silicon-containing material, e.g. glass
- 2266/06 . . Open cell foam
- 2266/08 . . Closed cell foam
- 2266/10 . . characterised by the foam pores

##### WARNING

Groups [B32B 2266/10](#), [B32B 2266/102](#), [B32B 2266/104](#), [B32B 2266/106](#), and [B32B 2266/108](#) are incomplete pending reclassification of documents from group [B32B 2266/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 2266/102 . . Nanopores, i.e. with average diameter smaller than 0.1 µm
- 2266/104 . . Micropores, i.e. with average diameter in the range from 0.1 µm to 0.1 mm
- 2266/106 . . Unimodal pore distribution
- 2266/108 . . Bimodal pore distribution



2266/12 . Gel

**WARNING**

Groups [B32B 2266/12](#), [B32B 2266/122](#), [B32B 2266/124](#), [B32B 2266/126](#), and [B32B 2266/128](#) are incomplete pending reclassification of documents from group [B32B 2266/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

2266/122 . . Hydrogel, i.e. a gel containing an aqueous composition

2266/124 . . Organogel, i.e. a gel containing an organic composition

2266/126 . . Aerogel, i.e. a supercritically dried gel

2266/128 . . Xerogel, i.e. an air dried gel

2266/14 . Adhesive foam

**WARNING**

Group [B32B 2266/14](#) is incomplete pending reclassification of documents from group [B32B 2266/00](#).

Groups [B32B 2266/00](#) and [B32B 2266/14](#) should be considered in order to perform a complete search.

**2270/00 Resin or rubber layer containing a blend of at least two different polymers**

**2272/00 Resin or rubber layer comprising scrap, waste or recycling material**

**2274/00 Thermoplastic elastomer material** ([thermoplastic elastomer fibres B32B 2262/0215](#), [thermoplastic elastomer particles B32B 2264/0221](#), [thermoplastic elastomer foam B32B 2266/0292](#))

**2305/00 Condition, form or state of the layers or laminate**

2305/02 . Cellular or porous

2305/022 . . Foam

2305/024 . . Honeycomb

2305/026 . . Porous

2305/028 . . Hollow fillers; Syntactic material

2305/07 . Parts immersed or impregnated in a matrix

2305/073 . . partially

2305/076 . . Prepregs

2305/08 . Reinforcements

2305/10 . Fibres of continuous length

2305/18 . . Fabrics, textiles

2305/182 . . . knitted

2305/184 . . . Braided fabrics

2305/186 . . . Knitted fabrics

2305/188 . . . Woven fabrics

2305/20 . . in the form of a non-woven mat

2305/22 . Fibres of short length

2305/24 . . Whiskers

2305/28 . . in the form of a mat

2305/30 . Fillers, e.g. particles, powders, beads, flakes, spheres, chips

2305/34 . Inserts

2305/342 . . Chips

2305/345 . . Heating elements

2305/347 . . Security elements

2305/38 . Meshes, lattices or nets

2305/54 . Filled microcapsules

2305/55 . Liquid crystals

2305/70 . Scrap or recycled material

2305/72 . Cured, e.g. vulcanised, cross-linked

2305/74 . Partially cured

2305/77 . Uncured, e.g. green

2305/80 . Sintered

**Condition, form, state or properties of the layers or laminate**

**2307/00 Properties of the layers or laminate**

2307/10 . having particular acoustical properties

2307/102 . . Insulating

2307/20 . having particular electrical or magnetic properties, e.g. piezoelectric

2307/202 . . Conductive

2307/204 . . Di-electric

2307/206 . . Insulating

2307/208 . . Magnetic, paramagnetic

2307/21 . . Anti-static

2307/212 . . Electromagnetic interference shielding

2307/30 . having particular thermal properties

2307/302 . . Conductive

2307/304 . . Insulating

2307/306 . . Resistant to heat

2307/3065 . . . Flame resistant or retardant, fire resistant or retardant

2307/308 . . Heat stability ([dimensional stability B32B 2307/734](#))

2307/31 . . Heat sealable

2307/40 . having particular optical properties ([light or UV resistant B32B 2307/71](#))

2307/402 . . Coloured

2307/4023 . . . on the layer surface, e.g. ink

2307/4026 . . . within the layer by addition of a colorant, e.g. pigments, dyes

2307/404 . . . Multi-coloured

2307/406 . . Bright, glossy, shiny surface

2307/408 . . Matt, dull surface

2307/409 . . Iridescent, pearlescent surface

2307/41 . . Opaque

2307/412 . . Transparent

2307/414 . . Translucent

2307/416 . . Reflective

2307/418 . . Refractive

2307/42 . . Polarizing, birefringent, filtering

2307/422 . . Luminescent, fluorescent, phosphorescent

2307/50 . having particular mechanical properties

2307/51 . . Elastic

2307/514 . . Oriented

2307/516 . . . mono-axially

2307/518 . . . bi-axially

2307/52 . . . multi-axially

2307/536 . . Hardness

2307/538 . . Roughness

2307/54 . . Yield strength; Tensile strength

2307/542 . . Shear strength

2307/544 . . Torsion strength; Torsion stiffness

2307/546 . . Flexural strength; Flexion stiffness

2307/548	. . Creep	2309/08	. Dimensions, e.g. volume
2307/552	. . Fatigue strength	2309/10	. . linear, e.g. length, distance, width
2307/554	. . Wear resistance	2309/105	. . . Thickness
2307/558	. . Impact strength, toughness	2309/12	. Pressure
2307/56	. . Damping, energy absorption	2309/125	. . Pressure vs time profiles
2307/58	. . Cuttability	2309/14	. Velocity, e.g. feed speeds
2307/581	. . . Resistant to cut	2309/16	. Tension
2307/582	. . Tearability	2309/60	. In a particular environment
2307/5825	. . . Tear resistant	2309/62	. . Inert
2307/584	. . Scratch resistance	2309/64	. . Sterile
2307/70	. Other properties	2309/65	. . Dust free, e.g. clean room
2307/702	. . Amorphous	2309/66	. . Fluid other than air
2307/704	. . Crystalline	2309/68	. . Vacuum
2307/706	. . Anisotropic	2309/70	. Automated, e.g. using a computer or microcomputer
2307/708	. . Isotropic	2309/72	. . For measuring or regulating, e.g. systems with feedback loops
2307/71	. . Resistive to light or to UV		
2307/712	. . Weather resistant		
2307/714	. . Inert, i.e. inert to chemical degradation, corrosion		
2307/7145	. . . Rot proof, resistant to bacteria, mildew, mould, fungi		
2307/716	. . Degradable		
2307/7163	. . . Biodegradable		
2307/7166	. . . Water-soluble, water-dispersible		
2307/718	. . Weight, e.g. weight per square meter		
2307/72	. . Density		
2307/722	. . . Non-uniform density		
2307/724	. . Permeability to gases, adsorption		
2307/7242	. . . Non-permeable		
2307/7244	. . . . Oxygen barrier		
2307/7246	. . . . Water vapor barrier		
2307/7248	. . . . Odour barrier		
2307/726	. . Permeability to liquids, absorption		
2307/7265	. . . Non-permeable		
2307/728	. . Hydrophilic		
2307/73	. . Hydrophobic		
2307/732	. . Dimensional properties		
2307/734	. . . Dimensional stability		
2307/736	. . . . Shrinkable		
2307/738	. . Thermoformability		
2307/74	. . Oxygen absorber		
2307/744	. . Non-slip, anti-slip		
2307/746	. . Slipping, anti-blocking, low friction		
2307/748	. . Releasability		
2307/75	. . Printability		
2307/752	. . Corrosion inhibitor		
2307/754	. . Self-cleaning		
2307/756	. . Refurbishable, i.e. marks or scratches can be removed		
2307/758	. . Odour absorbent		
2307/762	. . Self-repairing, self-healing		
2307/764	. . Insect repellent		

**Operating procedures; Apparatus details****2310/00 Treatment by energy or chemical effects**

2310/021	. using electrical effects ( <a href="#">B32B 2310/08</a> and <a href="#">B32B 2310/12</a> take precedence)
2310/022	. . Electrical resistance
2310/024	. . Peltier effect
2310/025	. . Electrostatic charges
2310/027	. using friction
2310/028	. using vibration, e.g. sonic or ultrasonic
2310/04	. using liquids, gas or steam
2310/0409	. . using liquids
2310/0418	. . . other than water
2310/0427	. . . Liquified gases
2310/0436	. . . Oil
2310/0445	. . using gas or flames ( <a href="#">B32B 2310/0427</a> takes precedence)
2310/0454	. . . Hot air
2310/0463	. . . other than air
2310/0472	. . . . inert gas
2310/0481	. . . . Ozone
2310/049	. . using steam or damp
2310/08	. by wave energy or particle radiation
2310/0806	. . using electromagnetic radiation
2310/0812	. . . using induction
2310/0818	. . . . using eddy currents
2310/0825	. . . using IR radiation
2310/0831	. . . using UV radiation
2310/0837	. . . using actinic light
2310/0843	. . . using laser
2310/085	. . . using X-ray
2310/0856	. . . using gamma-ray
2310/0862	. . . using microwave
2310/0868	. . . using radio frequency
2310/0875	. . using particle radiation
2310/0881	. . . using ion-radiation, e.g. alpha-rays
2310/0887	. . . using electron radiation, e.g. beta-rays
2310/0893	. . . using neutron radiation
2310/12	. using dielectric properties
2310/14	. Corona, ionisation, electrical discharge, plasma treatment

**2309/00 Parameters for the laminating or treatment process; Apparatus details**

2309/02	. Temperature
2309/022	. . Temperature vs pressure profiles
2309/025	. . Temperature vs time profiles
2309/027	. . Ambient temperature
2309/04	. Time
2309/06	. Angles

**2311/00 Metals, their alloys or their compounds****NOTE**

Alloys and compounds of specific metals are indexed with the same indexing code as the specific metals

- 2311/005 . Shape memory alloys
- 2311/02 . Noble metals
- 2311/04 . . Gold
- 2311/06 . . Platinum
- 2311/08 . . Silver
- 2311/09 . . Palladium
- 2311/10 . Mercury
- 2311/12 . Copper
- 2311/14 . Lead
- 2311/16 . Tin
- 2311/18 . Titanium
- 2311/20 . Zinc
- 2311/22 . Nickel or cobalt
- 2311/24 . Aluminium
- 2311/30 . Iron, e.g. steel

**Inorganic materials used for the layers, laminate or apparatus components****2313/00 Elements other than metals**

- 2313/02 . Boron
- 2313/04 . Carbon

**2315/00 Other materials containing non-metallic inorganic compounds not provided for in groups [B32B 2311/00](#) - [B32B 2313/04](#)**

- 2315/02 . Ceramics
- 2315/06 . Concrete
- 2315/08 . Glass
- 2315/085 . . Glass fiber cloth or fabric
- 2315/10 . Mica
- 2315/12 . Asbestos
- 2315/14 . Mineral wool
- 2315/16 . Clay
- 2315/18 . Plaster

**2317/00 Animal or vegetable based**

- 2317/02 . Cork
- 2317/04 . Linoleum
- 2317/06 . Bone; Horn; Ivory
- 2317/08 . Natural leather
- 2317/10 . Natural fibres, e.g. wool, cotton
- 2317/12 . Paper, e.g. cardboard
- 2317/122 . . Kraft paper
- 2317/125 . . impregnated with thermosetting resin
- 2317/127 . . Corrugated cardboard
- 2317/16 . Wood, e.g. woodboard, fibreboard, woodchips
- 2317/18 . Cellulose, modified cellulose or cellulose derivatives, e.g. viscose ([B32B 2317/10](#), [B32B 2317/12](#), [B32B 2317/16](#) take precedence)
- 2317/20 . Starch
- 2317/22 . Natural rubber ([synthetic rubber B32B 2319/00](#))
- 2317/24 . Oil ([B32B 2318/02](#) takes precedence)

**Other natural products or their composites used for the layers, laminate or apparatus components not provided for in groups [B32B 2311/00](#) - [B32B 2315/12](#) and [B32B 2319/00](#) - [B32B 2398/20](#)****2318/00 Mineral based**

- 2318/02 . Oil
- 2318/04 . Stone

**2319/00 Synthetic rubber ([natural rubber B32B 2317/22](#))****Organic materials used for the layers, laminate or apparatus components****2323/00 Polyalkenes**

- 2323/04 . Polyethylene
- 2323/043 . . HDPE, i.e. high density polyethylene
- 2323/046 . . LDPE, i.e. low density polyethylene
- 2323/10 . Polypropylene
- 2323/16 . EPDM, i.e. ethylene propylene diene monomer

**2325/00 Polymers of vinyl-aromatic compounds, e.g. polystyrene****2327/00 Polyvinylhalogenides**

- 2327/06 . PVC, i.e. polyvinylchloride
- 2327/12 . containing fluorine
- 2327/18 . . PTFE, i.e. polytetrafluoroethylene

**2329/00 Polyvinylalcohols, polyvinylethers, polyvinylaldehydes, polyvinylketones or polyvinylketals**

- 2329/04 . Polyvinylalcohol
- 2329/06 . PVB, i.e. polyvinylbutyral

**2331/00 Polyvinylesters**

- 2331/04 . Polymers of vinyl acetate, e.g. PVA

**2333/00 Polymers of unsaturated acids or derivatives thereof**

- 2333/04 . Polymers of esters
- 2333/08 . . Polymers of acrylic acid esters, e.g. PMA, i.e. polymethylacrylate
- 2333/12 . . Polymers of methacrylic acid esters, e.g. PMMA, i.e. polymethylmethacrylate

**2355/00 Specific polymers obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in a single one of index codes [B32B 2323/00](#) - [B32B 2333/00](#)**

- 2355/02 . ABS polymers, i.e. acrylonitrile-butadiene-styrene polymers

**2361/00 Phenoplast, aminoplast****2363/00 Epoxy resins****2367/00 Polyesters, e.g. PET, i.e. polyethylene terephthalate****2369/00 Polycarbonates****2371/00 Polyethers, e.g. PEEK, i.e. polyether-etherketone; PEK, i.e. polyetherketone****2375/00 Polyureas; Polyurethanes****2377/00 Polyamides****2379/00 Other polymers having nitrogen, with or without oxygen or carbon only, in the main chain**

2379/08	• Polyimides
<b>2383/00</b>	<b>Polysiloxanes</b>
<b>2386/00</b>	<b>Specific polymers obtained by polycondensation or polyaddition not provided for in a single one of index codes <a href="#">B32B 2363/00</a> - <a href="#">B32B 2383/00</a></b>
<b>2391/00</b>	<b>Waxes</b>
<b>2395/00</b>	<b>Bituminous material, e.g. tar, asphalt</b>
<b>2398/00</b>	<b>Unspecified macromolecular compounds</b>
2398/10	• Thermosetting resins
2398/20	• Thermoplastics

**Particular articles****NOTE**

Parts of specific articles are indexed with the same indexing codes as the articles

<b>2405/00</b>	<b>Adhesive articles, e.g. adhesive tapes (<a href="#">labels <a href="#">B32B 2519/00</a></a>)</b>
<b>2410/00</b>	<b>Agriculture-related articles</b>
<b>2413/00</b>	<b>Belts (<a href="#">conveyor belts <a href="#">B32B 2433/02</a></a>; <a href="#">drive belts <a href="#">B32B 2433/04</a></a>)</b>
<b>2419/00</b>	<b>Buildings or parts thereof (<a href="#">walls, panels <a href="#">B32B 2607/00</a></a>)</b>
2419/02	• Bricks
2419/04	• Tiles for floors or walls ( <a href="#">tiles for roofs <a href="#">B32B 2419/06</a></a> )
2419/06	• Roofs, roof membranes
<b>2425/00</b>	<b>Cards, e.g. identity cards, credit cards</b>
<b>2429/00</b>	<b>Carriers for sound or information</b>
2429/02	• Records or discs
<b>2432/00</b>	<b>Cleaning articles, e.g. mops, wipes (<a href="#">personal care <a href="#">B32B 2555/00</a></a>)</b>
<b>2433/00</b>	<b>Closed loop articles</b>
2433/02	• Conveyor belts
2433/04	• Driving belts
<b>2435/00</b>	<b>Closures, end caps, stoppers</b>
2435/02	• for containers
<b>2437/00</b>	<b>Clothing (<a href="#">anti-ballistic clothing <a href="#">B32B 2571/02</a></a>)</b>
2437/02	• Gloves, shoes
2437/04	• Caps, helmets
<b>2439/00</b>	<b>Containers; Receptacles (<a href="#">closures therefor <a href="#">B32B 2435/00</a></a>)</b>
2439/02	• Open containers
2439/06	• • Bags, sacks, sachets
2439/40	• Closed containers
2439/46	• • Bags
2439/60	• • Bottles
2439/62	• • Boxes, cartons, cases
2439/66	• • Cans, tins
2439/70	• Food packaging
2439/80	• Medical packaging
<b>2451/00</b>	<b>Decorative or ornamental articles (<a href="#">wall paper <a href="#">B32B 2607/02</a></a>)</b>

<b>2457/00</b>	<b>Electrical equipment</b>
2457/04	• Insulators
2457/08	• PCBs, i.e. printed circuit boards
2457/10	• Batteries
2457/12	• Photovoltaic modules
2457/14	• Semiconductor wafers
2457/16	• Capacitors
2457/18	• Fuel cells
2457/20	• Displays, e.g. liquid crystal displays, plasma displays
2457/202	• • LCD, i.e. liquid crystal displays
2457/204	• • Plasma displays
2457/206	• • Organic displays, e.g. OLED
2457/208	• • Touch screens
<b>2459/00</b>	<b>Nets, e.g. camouflage nets</b>
<b>2471/00</b>	<b>Floor coverings (<a href="#">B32B 2419/04</a> takes precedence)</b>
2471/02	• Carpets
2471/04	• Mats
<b>2475/00</b>	<b>Frictional elements</b>
<b>2479/00</b>	<b>Furniture (<a href="#">upholstery <a href="#">B32B 2601/00</a></a>)</b>
<b>2509/00</b>	<b>Household appliances</b>
2509/10	• Refrigerators or refrigerating equipment
<b>2519/00</b>	<b>Labels, badges</b>
2519/02	• RFID tags
<b>2535/00</b>	<b>Medical equipment, e.g. bandage, prostheses, catheter (<a href="#">medical patches <a href="#">B32B 2556/00</a></a>)</b>
<b>2551/00</b>	<b>Optical elements</b>
2551/08	• Mirrors
<b>2553/00</b>	<b>Packaging equipment or accessories not otherwise provided for</b>
2553/02	• Shock absorbing
2553/023	• • for use in loose form, e.g. dunnage
2553/026	• • Bubble films
<b>2554/00</b>	<b>Paper of special types, e.g. banknotes</b>
<b>2555/00</b>	<b>Personal care</b>
2555/02	• Diapers or napkins
<b>2556/00</b>	<b>Patches, e.g. medical patches, repair patches</b>
<b>2559/00</b>	<b>Photographic equipment or accessories</b>
<b>2571/00</b>	<b>Protective equipment</b>
2571/02	• defensive, e.g. armour plates, anti-ballistic clothing ( <a href="#">camouflage nets <a href="#">B32B 2459/00</a></a> )
<b>2581/00</b>	<b>Seals; Sealing equipment; Gaskets</b>
<b>2590/00</b>	<b>Signboards, advertising panels, road signs</b>
<b>2597/00</b>	<b>Tubular articles, e.g. hoses, pipes</b>
<b>2601/00</b>	<b>Upholstery</b>
<b>2603/00</b>	<b>Vanes, blades, propellers, rotors with blades</b>
<b>2605/00</b>	<b>Vehicles</b>
2605/003	• Interior finishings
2605/006	• Transparent parts made from plastic material, e.g. windows
2605/08	• Cars



- 2605/10 . Trains
- 2605/12 . Ships
- 2605/16 . Submarines
- 2605/18 . Aircraft ([blades, propellers B32B 2603/00](#))
- 2607/00 Walls, panels**
- 2607/02 . Wall papers, wall coverings