

SECTION B — PERFORMING OPERATIONS; TRANSPORTING

B31 MAKING ARTICLES OF PAPER, CARDBOARD OR MATERIAL WORKED IN A MANNER ANALOGOUS TO PAPER; WORKING PAPER, CARDBOARD OR MATERIAL WORKED IN A MANNER ANALOGOUS TO PAPER

Note(s)

1. This class covers subject matter restricted to adaptations or associations of handling sheets, webs, or blanks peculiar to paper-working, e.g. bag or box making, machinery.
2. This class does not cover:
 - making articles directly from paper pulp, which is covered by D21J;
 - handling sheets, webs or blanks of wider applicability, irrespective of whether described or claimed only for paper-working machinery, which is regarded as being of a more comprehensive nature and is covered by B65H.
3. Sheet materials made from plastics, laminated materials and metal foils are examples of materials that can be worked in a manner analogous to paper.

B31B MAKING CONTAINERS OF PAPER, CARDBOARD OR MATERIAL WORKED IN A MANNER ANALOGOUS TO PAPER (making wound articles, e.g. wound tubes, B31C; combined making and filling B65B)

Note(s)

In this subclass, the following terms or expressions are used with the meanings indicated:

- "rigid or semi-rigid containers" includes:
 - containers not deformed by, or not taking-up the shape of, their contents;
 - containers adapted to be temporarily deformed to expel their contents;
 - pallets;
 - trays;
- "flexible containers" includes:
 - containers deformed by, or taking-up the shape of, their contents;
 - containers adapted to be permanently deformed to expel their contents.

50/00	Making rigid or semi-rigid containers, e.g. boxes or cartons [2017.01]	50/36	• • by continuously feeding the sheets, blanks or webs to stationary members, e.g. plates, ploughs or cores [2017.01]
	Note(s) [2017.01]	50/38	• • • the members being forming-tubes [2017.01]
	In this group, it is desirable to add the indexing codes of groups B31B 100/00-B31B 120/00.	50/40	• • • acting internally [2017.01]
50/02	• Feeding or positioning sheets, blanks or webs [2017.01]	50/42	• • • acting externally [2017.01]
50/04	• • Feeding sheets or blanks [2017.01]	50/44	• • by plungers moving through folding dies [2017.01]
50/06	• • • from stacks [2017.01]	50/46	• • • and interconnecting side walls [2017.01]
50/07	• • • by air pressure or suction [2017.01]	50/48	• • • by folding or tucking in locking flaps [2017.01]
50/10	• • Feeding or positioning webs [2017.01]	50/50	• • • • by interengaging tongues and slots [2017.01]
50/12	• • • by air pressure or suction [2017.01]	50/52	• • by reciprocating or oscillating members, e.g. fingers (by plungers moving through folding dies B31B 50/44) [2017.01]
50/14	• Cutting, e.g. perforating, punching, slitting or trimming (cutting window openings B31B 50/83) [2017.01]	50/54	• • • operating on moving material [2017.01]
50/16	• • Cutting webs [2017.01]	50/56	• • by rotary members co-operating with blades [2017.01]
50/18	• • • longitudinally [2017.01]	50/58	• • by moving endless belts [2017.01]
50/20	• • Cutting sheets or blanks [2017.01]	50/585	• • by air jets [2017.01]
50/22	• • • Notching; Trimming edges of flaps [2017.01]	50/59	• Shaping sheet material under pressure (by folding B31B 50/26; embossing B31B 50/88) [2017.01]
50/25	• Surface scoring [2017.01]	50/60	• • • • • Uniting opposed surfaces or edges; Taping [2017.01]
50/26	• Folding sheets, blanks or webs [2017.01]	50/62	• • by adhesives [2017.01]
50/28	• • around mandrels, e.g. for forming bottoms [2017.01]		
50/30	• • • the mandrels moving [2017.01]		
50/32	• • • • in circular paths [2017.01]		
50/34	• • • • about their own axes [2017.01]		

B31B

- 50/64 • • by applying heat or pressure, e.g. by welding (to unite areas where adhesives are applied B31B 50/62) [2017.01]
- 50/66 • • • by high-frequency electric heating [2017.01]
- 50/68 • • by stitching, stapling or riveting [2017.01]
- 50/70 • • • by corner stapling [2017.01]
- 50/72 • • by applying and securing strips or sheets [2017.01]
- 50/73 • • by mechanically interlocking integral parts, e.g. by tongues and slots (interconnecting side walls during folding by plungers moving through folding dies B31B 50/46) [2017.01]
- 50/74 • Auxiliary operations [2017.01]
- 50/76 • • Opening and distending flattened articles [2017.01]
- 50/78 • • • mechanically [2017.01]
- 50/80 • • • pneumatically [2017.01]
- 50/81 • • Forming or attaching accessories, e.g. opening devices, closures or tear strings [2017.01]
- 50/82 • • • Forming or attaching windows [2017.01]
- 50/83 • • • • Cutting window openings [2017.01]
- 50/84 • • • Forming or attaching means for filling or dispensing contents, e.g. valves or spouts [2017.01]
- 50/85 • • • • Applying patches or flexible valve inserts, e.g. applying film-like valves [2017.01]
- 50/86 • • • Forming integral handles; Attaching separate handles [2017.01]
- 50/88 • • Printing; Embossing [2017.01]
- 50/92 • • Delivering [2017.01]
- 50/94 • • • singly or in succession [2017.01]
- 50/96 • • • • in an overlapping arrangement [2017.01]
- 50/98 • • • in stacks or bundles [2017.01]
- 50/99 • using hand tools [2017.01]
- 70/00 Making flexible containers, e.g. envelopes or bags [2017.01]**
- Note(s) [2017.01]**
- 1. Processes or apparatus for making both flexible containers and rigid or semi-rigid containers are classified in group B31B 50/00.
- 2. In this group, it is desirable to add the indexing codes of groups B31B 150/00-B31B 170/00.
- 70/02 • Feeding or positioning sheets, blanks or webs [2017.01]
- 70/04 • • Feeding sheets or blanks [2017.01]
- 70/10 • • Feeding or positioning webs [2017.01]
- 70/14 • Cutting, e.g. perforating, punching, slitting or trimming (cutting window openings B31B 70/83) [2017.01]
- 70/16 • • Cutting webs [2017.01]
- 70/18 • • • longitudinally [2017.01]
- 70/20 • • Cutting sheets or blanks [2017.01]
- 70/26 • Folding sheets, blanks or webs [2017.01]
- 70/36 • • by continuously feeding them to stationary members, e.g. plates, ploughs or cores [2017.01]
- 70/52 • • by reciprocating or oscillating members other than plungers and dies, e.g. by fingers [2017.01]
- 70/60 • • Uniting opposed surfaces or edges; Taping [2017.01]
- 70/62 • • by adhesives [2017.01]
- 70/64 • • by applying heat or pressure (to unite areas where adhesives are applied B31B 70/62) [2017.01]
- 70/66 • • • by high-frequency electric heating [2017.01]
- 70/68 • • by stitching, stapling or riveting [2017.01]
- 70/74 • Auxiliary operations [2017.01]

- 70/81 • • Forming or attaching accessories, e.g. opening devices, closures or tear strings [2017.01]
- 70/82 • • • Forming or attaching windows [2017.01]
- 70/83 • • • • Cutting window openings [2017.01]
- 70/84 • • • Forming or attaching means for filling or dispensing contents, e.g. valves or spouts [2017.01]
- 70/85 • • • • Applying patches or flexible valve inserts, e.g. applying film-like valves [2017.01]
- 70/855 • • • • Forming valves integral with the containers [2017.01]
- 70/86 • • Forming integral handles or mounting separate handles [2017.01]
- 70/88 • • Printing; Embossing [2017.01]
- 70/92 • • Delivering [2017.01]
- 70/94 • • • singly or in succession [2017.01]
- 70/96 • • • • in an overlapping arrangement [2017.01]
- 70/98 • • • in stacks or bundles [2017.01]
- 70/99 • using hand tools [2017.01]

Indexing scheme associated with group B31B 50/00, relating to making of rigid or semi-rigid containers [2017.01]

- 100/00 Rigid or semi-rigid containers made by folding single-piece sheets, blanks or webs [2017.01]**
- 105/00 Rigid or semi-rigid containers made by assembling separate sheets, blanks or webs [2017.01]**
- 110/00 Shape of rigid or semi-rigid containers [2017.01]**
- 110/10 • having a cross section of varying size or shape, e.g. conical or pyramidal [2017.01]
- 110/20 • having a curved cross section, e.g. circular [2017.01]
- 110/30 • having a polygonal cross section [2017.01]
- 110/35 • • rectangular, e.g. square [2017.01]
- 110/40 • without sidewalls [2017.01]
- 120/00 Construction of rigid or semi-rigid containers [2017.01]**
- 120/10 • provided with covers, e.g. lids [2017.01]
- 120/20 • provided with two or more compartments [2017.01]
- 120/25 • • formed by partitions or like inserts not integral with walls [2017.01]
- 120/30 • collapsible; temporarily collapsed during manufacturing [2017.01]
- 120/40 • lined or internally reinforced [2017.01]
- 120/50 • covered or externally reinforced [2017.01]
- 120/60 • of drawer-and-shell type [2017.01]
- 120/70 • having corrugated or pleated walls [2017.01]

Indexing scheme associated with group B31B 70/00, relating to making of flexible containers [2017.01]

- 150/00 Flexible containers made from sheets or blanks, e.g. from flattened tubes [2017.01]**
- 150/10 • the longitudinal axes of the containers being parallel to the direction in which the sheets or blanks are fed [2017.01]
- 150/20 • the longitudinal axes of the containers being perpendicular to the direction in which the sheets or blanks are fed [2017.01]
- 155/00 Flexible containers made from webs [2017.01]**
- 160/00 Shape of flexible containers [2017.01]**

160/10	• rectangular and flat, i.e. without structural provision for thickness of contents [2017.01]	170/00	Construction of flexible containers [2017.01]
160/20	• with structural provision for thickness of contents [2017.01]	170/10	• interconnected [2017.01]
160/30	• pointed or tapered [2017.01]	170/20	• having multi-layered walls, e.g. laminated or lined [2017.01]
		170/30	• having corrugated or pleated walls [2017.01]

B31C MAKING WOUND ARTICLES, e.g. WOUND TUBES, OF PAPER, CARDBOARD OR MATERIAL WORKED IN A MANNER ANALOGOUS TO PAPER

Note(s)

In this subclass, the following term is used with the meaning indicated:

- "winding" means forming two or more complete convolutions.

Subclass index

MAKING WOUND ARTICLES CHARACTERISED BY THE METHOD USED

Winding around mandrels.....	1/00, 3/00
Winding without mandrels.....	5/00
Winding separate webs.....	9/00

MAKING WOUND ARTICLES CHARACTERISED BY THE SHAPE OF THE ARTICLES PRODUCED

Tubes.....	1/00, 3/00, 5/00
Cones.....	7/00
Other shapes.....	9/00, 99/00

AFTER-TREATMENTS, COMBINED MACHINERY 11/00

1/00 Making tubes or pipes by feeding at right angles to the winding mandrel centre line [1, 2006.01]	7/02	• Forming truncated cones [1, 2006.01]
1/02 • Machines therefor having additional mandrels [1, 2006.01]	7/04	• • on two or more mandrels [1, 2006.01]
1/04 • and forming a tube end into a container bottom [1, 2006.01]	7/06	• • • and inserting into a cone end a bottom to form a container [1, 2006.01]
1/06 • and inserting into a tube end a bottom to form a container [1, 2006.01]	7/08	• Forming pointed cones [1, 2006.01]
1/08 • Accessories of machines therefor not otherwise provided for [1, 2006.01]	7/10	• • on two or more mandrels [1, 2006.01]
3/00 Making tubes or pipes by feeding obliquely to the winding mandrel centre line [1, 2006.01]	9/00	Simultaneous forming of cylindrical and conical shapes by winding separate webs, e.g. forming bottles [1, 2006.01]
3/02 • and inserting into a tube end a bottom to form a container [1, 2006.01]	11/00	Machinery for winding combined with other machinery [1, 2006.01]
3/04 • Seam processing [1, 2006.01]	11/02	• for additionally shaping the articles [1, 2006.01]
5/00 Making tubes or pipes without using mandrels [1, 2006.01]	11/04	• for applying impregnating by coating-substances during the winding [1, 2006.01]
7/00 Making conical articles by winding [1, 2006.01]	11/06	• for drying the wound and impregnated articles [1, 2006.01]
	99/00	Subject matter not provided for in other groups of this subclass [2009.01]

B31D MAKING ARTICLES OF PAPER, CARDBOARD OR MATERIAL WORKED IN A MANNER ANALOGOUS TO PAPER, NOT PROVIDED FOR IN SUBCLASSES B31B OR B31C (manufacture by dry processes of articles made from particles or fibres consisting of wood or other lignocellulosic or like organic material B27N; making layered products not composed wholly of paper or cardboard B32B; making articles from cellulosic fibrous suspensions, e.g. wood pulp, D21J)

1/00 Multiple-step processes for making flat articles [1, 2006.01, 2017.01]	3/04	• cellular packaging articles, e.g. for bottles [1, 2006.01]
1/02 • the articles being labels or tags [1, 2006.01]	5/00	Multiple-step processes for making three-dimensional articles [1, 2006.01, 2017.01]
1/04 • the articles being napkins, handkerchiefs, towels, doilies, or the like [1, 2006.01]	5/02	• including pressing [1, 2006.01, 2017.01]
1/06 • the articles being handles [1, 2006.01]	5/04	• including folding or pleating, e.g. Chinese lanterns [1, 2006.01, 2017.01]
3/00 Making articles of cellular structure, e.g. insulating board [1, 2006.01, 2017.01]		
3/02 • honeycombed structures [1, 2006.01]		

B31D**99/00 Subject matter not provided for in other groups of****this subclass [2006.01, 2017.01]****B31F MECHANICAL WORKING OR DEFORMATION OF PAPER, CARDBOARD OR MATERIAL WORKED IN A MANNER ANALOGOUS TO PAPER (making layered products not composed wholly of paper or cardboard B32B)****1/00 Mechanical deformation without removing material, e.g. in combination with laminating [1, 2, 2006.01]**

1/07 • Embossing (corrugating B31F 1/20; embossing in combination with printing B41F 19/02, B41M 1/24; typewriters for embossing B41J 3/38; stamping in combination with deforming B41K 3/36) [3, 2006.01]

1/08 • Creasing (corrugating B31F 1/20; zig-zag folding B65H 45/20) [1, 2, 2006.01]

1/10 • • by rotary tools [1, 2006.01]

1/12 • Crêping [1, 2006.01]

1/14 • • by doctor blades arranged crosswise to the web [1, 2006.01]

1/16 • • by elastic belts [1, 2006.01]

1/18 • • by tools arranged in the direction of web feed [1, 2006.01]

1/20 • Corrugating; Corrugating combined with laminating to other layers [1, 2, 2006.01]

1/22 • • Making webs in which the channel of each corrugation is longitudinal with the web feed [1, 2006.01]

1/24 • • Making webs in which the channel of each corrugation is transverse to the web feed [1, 2006.01]

1/26 • • • by interengaging toothed cylinders [1, 2, 2006.01]

1/28 • • • • combined with uniting the corrugated webs to flat webs [1, 2006.01]

1/29 • • • by making use of rods, e.g. co-operating with a toothed cylinder [2, 2006.01]

1/30 • • • Tools secured to endless chains [1, 2006.01]

1/32 • • Corrugating already corrugated webs [1, 2006.01]

1/36 • Moistening and heating webs to facilitate mechanical deformation and drying deformed webs [1, 2006.01]

5/00 Attaching together sheets, strips or webs; Reinforcing edges [1, 2006.01]

5/02 • by crimpling or slotting [1, 2006.01]

5/04 • by exclusive use of adhesives [1, 2006.01]

5/06 • by adhesive tape [1, 2006.01]

5/08 • • for reinforcing edges [1, 2006.01]

7/00 Processes not otherwise provided for [1, 2006.01]

7/02 • Breaking coatings, e.g. on paper or cardboard [1, 2006.01]