

CPC COOPERATIVE PATENT CLASSIFICATION

A61L METHODS OR APPARATUS FOR STERILISING MATERIALS OR OBJECTS IN GENERAL; DISINFECTION, STERILISATION, OR DEODORISATION OF AIR; CHEMICAL ASPECTS OF BANDAGES, DRESSINGS, ABSORBENT PADS, OR SURGICAL ARTICLES; MATERIALS FOR BANDAGES, DRESSINGS, ABSORBENT PADS, OR SURGICAL ARTICLES (preservation of bodies or disinfecting characterised by the agent employed [A01N](#); preserving, e.g. sterilising, food or foodstuffs [A23](#); preparations for medical, dental or toilet purposes [A61K](#); preparation of ozone [C01B 13/10](#))

WARNINGS

- The following IPC groups are not used in the CPC system. Subject matter covered by these groups is classified in the following CPC groups:

A61L 33/10	covered by	A61L 33/0011
A61L 33/14	covered by	A61L 33/0011
A61L 33/16	covered by	A61L 33/0047
A61L 101/00-A61L 101/56	covered by	
- IPC7 groups [A61L 2/07](#) and subgroups, and [A61L 9/012](#) - [A61L 9/014](#) might be incomplete as relevant documents might still be classified in the hierarchical higher groups

Disinfection or sterilising

2/00	Methods or apparatus for disinfecting or sterilising materials or objects other than foodstuffs or contact lenses; Accessories therefor (for contact lenses A61L 12/00 ; atomisers for disinfecting agents A61M ; sterilisation of packages or package contents in association with packaging B65B 55/00 ; treatment of water, waste water, sewage or sludge C02F ; disinfecting paper D21H 21/36 ; disinfecting devices for water closets E03D ; articles having provision for disinfection, see the relevant subclasses for these articles, e.g. H04R 1/12)	2/082	. . . {X-rays}
2/0005	. {for pharmaceuticals, biologicals or living parts}	2/084	. . . {Visible light}
2/0011	. . {using physical methods}	2/085	. . . {Infrared radiation}
2/0017	. . . {Filtration}	2/087	. . . {Particle radiation, e.g. electron-beam, alpha or beta radiation}
2/0023	. . . {Heat}	2/088	. . . {using a photocatalyst or photosensitiser}
2/0029	. . . {Radiation}	2/10	. . . Ultra-violet radiation
2/0035	. . . . {Gamma radiation}	2/12	. . . Microwaves
2/0041	. . . . {X-rays}	2/14	. . Plasma, i.e. ionised gases
2/0047	. . . . {Ultraviolet radiation}	2/16	. using chemical substances
2/0052	. . . . {Visible light}	2/18	. . Liquid substances {or solutions comprising solids or dissolved gases}
2/0058	. . . . {Infrared radiation}	2/183	. . . {Ozone dissolved in a liquid}
2/0064	. . . . {Microwaves}	2/186	. . . {Peroxide solutions}
2/007	. . . . {Particle radiation, e.g. electron-beam, alpha or beta radiation}	2/20	. . Gaseous substances, e.g. vapours
2/0076	. . . . {using a photocatalyst or photosensitiser}	2/202	. . . {Ozone}
2/0082	. . {using chemical substances}	2/204	. . . {Formaldehyde}
2/0088	. . . {Liquid substances}	2/206	. . . {Ethylene oxide}
2/0094	. . . {Gaseous substances}	2/208	. . . {Hydrogen peroxide}
2/02	. using physical phenomena	2/22	. . Phase substances, e.g. smokes, aerosols {or sprayed or atomised substances}
2/022	. . {Filtration}	2/23	. . Solid substances, e.g. granules, powders, blocks, tablets
2/025	. . Ultrasonics	2/232	. . . layered or coated
2/03	. . Electric current	2/235	. . . cellular, porous or foamed
2/035	. . . {Electrolysis}	2/238	. . . Metals or alloys, e.g. oligodynamic metals
2/04	. . Heat (A61L 2/08 takes precedence)	2/24	. Apparatus using programmed or automatic operation
2/06	. . . Hot gas	2/26	. Accessories {or devices or components used for biocidal treatment}
2/07	. . . . Steam	2/28	. . Devices for testing the effectiveness or completeness of sterilisation, e.g. indicators which change colour (apparatus involving enzymes or micro-organisms C12M 1/34 ; methods involving enzymes or micro-organisms C12Q 1/00)
2/08	. . Radiation		
2/081	. . . {Gamma radiation}		

- 9/00 Disinfection, sterilisation or deodorisation of air** (body deodorants [A61Q 15/00](#); purifying air by respirators [A62B](#), [A62D 9/00](#); separating dispersed particles from gases or vapours [B01D 45/00](#) - [B01D 51/00](#), [B03C 3/00](#); chemical or biological purification of waste gases [B01D 53/34](#); production of ozone [C01B 13/10](#); air-conditioning systems incorporating sterilisation [F24F 3/16](#))
- 9/01 . Deodorant compositions {(compositions released by contact with a liquid [A61L 9/05](#))}
- 9/012 . . characterised by being in a special form, e.g. gels, emulsions {([A61L 9/048](#) takes precedence)}
- 9/013 . . containing animal or plant extracts, or vegetable material
- 9/014 . . containing sorbent material, e.g. activated carbon
- 9/015 . using gaseous or vaporous substances, e.g. ozone ([A61L 9/20](#) takes precedence; {evaporation in general [B01B 1/005](#)})
- 9/02 . . using substances evaporated in the air by heating or combustion
- 9/03 . . . Apparatus therefor
- 9/032 {comprising a fan}
- 9/035 {emanating multiple odours}
- 9/037 {comprising a wick}
- 9/04 . . using substances evaporated in the air without heating
- 9/042 . . . {with the help of a macromolecular compound as a carrier or diluent ([A61L 9/048](#) takes precedence)}
- 9/044 . . . {with the help of an organic compound other than a macromolecular compound}
- 9/046 . . . {with the help of a non-organic compound}
- 9/048 . . . {air treating gels}
- 9/05 . . . specially adapted to be released by contact with a liquid, e.g. for toilets
- 9/12 . . . Apparatus, e.g. holders, therefor
- 9/122 {comprising a fan}
- 9/125 {emanating multiple odours}
- 9/127 {comprising a wick}
- 9/14 . using sprayed or atomised substances {including air-liquid contact processes}
- 9/145 . . {air-liquid contact processes, e.g. scrubbing}
- 9/16 . using physical phenomena
- 9/18 . . Radiation ([A61L 9/22](#) takes precedence)
- 9/20 . . . Ultra-violet radiation
- 9/205 {using a photocatalyst or photosensitiser}
- 9/22 . . Ionisation
- 11/00 Methods specially adapted for refuse** {(desintegrating medical waste [B02C 19/0075](#); disposal of medical waste [B09B 3/0075](#))}
- 12/00 Methods or apparatus for disinfecting or sterilising contact lenses; Accessories therefor**
- 12/02 . using physical phenomena, e.g. electricity, ultrasonics or ultrafiltration
- 12/023 . . {Electrolysis}
- 12/026 . . {Ultrasounds}
- 12/04 . . Heat ([A61L 12/06](#) takes precedence)
- 12/06 . . Radiation, e.g. ultraviolet or microwaves
- 12/063 . . . {Ultraviolet radiation}
- 12/066 . . . {Microwaves}
- 12/08 . using chemical substances
- 12/082 . . {in combination with specific enzymes}

- 12/084 . . {in a gaseous state}
- 12/086 . . {Container, accessories or devices therefor}
- 12/088 . . {Heavy metals}
- 12/10 . . Halogens or compounds thereof
- 12/102 . . . {Chlorine dioxide (ClO₂)}
- 12/105 . . . {Iodine, iodides or iodophores}
- 12/107 . . . {Hypohalites; Active halogens}
- 12/12 . . Non-macromolecular oxygen-containing compounds, e.g. hydrogen peroxide or ozone ([A61L 12/10](#) takes precedence)
- 12/122 . . . {Ozone}
- 12/124 . . . {Hydrogen peroxide; Peroxy compounds}
- 12/126 {neutralised with catalase or peroxidase}
- 12/128 {neutralised with catalysts}
- 12/14 . . Organic compounds not covered by groups [A61L 12/10](#) or [A61L 12/12](#)
- 12/141 . . . {Biguanides, e.g. chlorhexidine}
- 12/142 {Polymeric biguanides}
- 12/143 . . . {Quaternary ammonium compounds}
- 12/145 {Polymeric quaternary ammonium compounds}
- 12/146 . . . {Aldehydes}
- 12/147 . . . {Alcohols or derivatives thereof ([aldehydes](#) [A61L 12/146](#))}
- 12/148 . . . {Mercury containing compounds, e.g. thimerosal}

Chemical aspects of, or use of materials for, bandages, dressings or absorbent pads {comprising a solid support or backing} (for liquid bandages [A61L 26/00](#); radioactive dressings {[A61N 5/1029](#) } {transdermal delivery devices [A61K 9/7023](#)})

15/00 Chemical aspects of, or use of materials for, bandages, dressings or absorbent pads (for liquid bandages [A61L 26/00](#); radioactive dressings {[A61N 5/1029](#)})

NOTES

1. In each set of groups [A61L 15/08](#) - [A61L 15/12](#) and [A61L 15/18](#) - [A61L 15/40](#), in the absence of an indication to the contrary, classification is made in the last appropriate place.
2. When classifying in groups [A61L 15/08](#) - [A61L 15/12](#), classification is also made in group [A61L 15/14](#) if the use of materials characterised by their function or physical properties is of interest.
3. When classifying in groups [A61L 15/18](#) - [A61L 15/40](#), classification is also made in groups [A61L 15/42](#) - [A61L 15/64](#) if the use of materials characterised by their function or physical properties is of interest.

- 15/07 . Stiffening bandages
- 15/08 . . containing inorganic materials, e.g. plaster of Paris
- 15/10 . . containing organic materials
- 15/12 . . containing macromolecular materials

NOTE

In group [A61L 15/12](#) and subgroups, the use of specific polymers is indicated using the relevant combination set symbol, adding, after the [A61L 15/12](#) symbol, the correspondent symbol of the polymer composition in subclass

- A61L 15/12 (continued)
- 15/125 . . . {Mixtures of macromolecular compounds}
 - 15/14 . . Use of materials characterised by their function or physical properties
 - 15/16 . Bandages, dressings or absorbent pads for physiological fluids such as urine or blood, e.g. sanitary towels, tampons
 - 15/18 . . containing inorganic materials
 - 15/20 . . containing organic materials
 - 15/22 . . containing macromolecular materials

NOTE

In groups [A61L 15/22](#) - [A61L 15/30](#), the use of specific polymers is indicated using the relevant combination set symbol, adding, after the symbol in [A61L](#), the correspondent symbol of the polymer in subclass [C08L](#), e.g. absorbent pad containing starch [A61L 15/22, C08L 3/02](#)

- 15/225 . . . {Mixtures of macromolecular compounds}
- 15/24 . . . Macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds; Derivatives thereof {[\(A61L 15/225 takes precedence\)](#)}
- 15/26 . . . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds; Derivatives thereof {[\(A61L 15/225 takes precedence\)](#)}
- 15/28 . . . Polysaccharides or their derivatives {[\(A61L 15/225 takes precedence\)](#)}
- 15/30 . . . Rubbers or their derivatives {[\(A61L 15/225 takes precedence\)](#)}
- 15/32 . . . Proteins, polypeptides; Degradation products or derivatives thereof, e.g. albumin, collagen, fibrin, gelatin {[\(A61L 15/225 takes precedence\)](#)}
- 15/325 {Collagen}
- 15/34 . . . Oils, fats, waxes or natural resins {[\(A61L 15/225 takes precedence\)](#)}
- 15/36 . . containing micro-organisms
- 15/38 . . containing enzymes
- 15/40 . . containing ingredients of undetermined constitution or reaction products thereof, {e.g. [plant or animal extracts](#)}
- 15/42 . . Use of materials characterised by their function or physical properties ([liquid bandages A61L 26/00](#))
- 15/425 . . . {Porous materials, e.g. foams or sponges}
- 15/44 . . . Medicaments
- 15/46 . . . Deodorants or malodour counteractants, e.g. to inhibit the formation of ammonia or bacteria
- 15/48 . . . Surfactants
- 15/50 . . . Lubricants; Anti-adhesive agents
- 15/52 . . . Water-repellants
- 15/54 . . . Radio-opaque materials
- 15/56 . . . Wetness-indicators or colourants
- 15/58 . . . Adhesives
- 15/585 {Mixtures of macromolecular compounds}
- 15/60 . . . Liquid-swellable gel-forming materials, e.g. super-absorbents
- 15/62 . . . {Compostable,} hydrosoluble or hydrodegradable materials

- 15/64 . . . specially adapted to be resorbable inside the body

- 17/00 Materials for surgical sutures or for ligaturing blood vessels** ([surgical adhesives A61L 24/00](#); [surgical instruments, devices or methods for suturing or ligaturing A61B 17/04, A61B 17/12](#); [supports or packages for suture materials A61B 17/04](#)); **{Materials for prostheses or catheters** ([bone cements or surgical adhesives for soft body tissues A61L 24/00](#); [shape or structure of prostheses A61F 2/00](#); [shape or structure of catheters A61M 5/00](#))}

NOTES

1. In groups [A61L 17/04](#) - [A61L 17/145](#), in the absence of an indication to the contrary, classification is made in the last appropriate place.
2. When classifying in group [A61L 17/00](#), classification is also made in [A61L 33/00](#) if the materials used are antithrombogenic.

- 17/005 . {containing a biologically active substance, e.g. a medicament or a biocide}
- 17/04 . Non-resorbable materials
- 17/06 . At least partially resorbable materials
- 17/08 . . of animal origin, e.g. catgut, collagen
- 17/10 . . containing macromolecular materials
- 17/105 . . . {Polyesters not covered by [A61L 17/12](#)}
- 17/12 . . . Homopolymers or copolymers of glycolic acid or lactic acid
- 17/14 . Post-treatment to improve physical properties
- 17/145 . . {Coating}

- 24/00 Surgical adhesives or cements; Adhesives for colostomy devices**

NOTES

1. In groups [A61L 24/00](#) - [A61L 24/12](#), the use of specific polymers is indicated using the relevant combination set symbol, adding, after the symbol in [A61L](#), the correspondent symbol of the polymer in subclass [C08L](#), e.g. surgical adhesives based on polymethylmethacrylate: [A61L 24/06, C08L 33/12](#)
2. In groups [A61L 24/02](#) - [A61L 24/12](#), in the absence of an indication to the contrary, classification is made in the last appropriate place.
3. When classifying in group [A61L 24/00](#), classification is also made in [A61L 33/00](#) if the materials used are antithrombogenic.

- 24/0005 . {Ingredients of undetermined constitution or reaction products thereof}
- 24/001 . {Use of materials characterised by their function or physical properties}
- 24/0015 . . {Medicaments; Biocides}
- 24/0021 . . {Plasticisers}
- 24/0026 . . {Sprayable compositions}
- 24/0031 . . {Hydrogels or hydrocolloids}
- 24/0036 . . {Porous materials, e.g. foams or sponges}
- 24/0042 . . {Materials resorbable by the body}
- 24/0047 . {Composite materials, i.e. containing one material dispersed in a matrix of the same or different material}
- 24/0052 . . {with an inorganic matrix}
- 24/0057 . . . {Carbon}

- 24/0063 . . . {Phosphorus containing materials, e.g. apatite}
- 24/0068 . . . {Inorganic materials not covered by groups [A61L 24/0057](#) or [A61L 24/0063](#)}
- 24/0073 . . . {with a macromolecular matrix}
- 24/0078 . . . {containing fillers of carbon}
- 24/0084 . . . {containing fillers of phosphorus-containing inorganic compounds, e.g. apatite}
- 24/0089 . . . {containing inorganic fillers not covered by groups [A61L 24/0078](#) or [A61L 24/0084](#)}
- 24/0094 . . . {containing macromolecular fillers}
- 24/02 . containing inorganic materials
- 24/04 . containing macromolecular materials
- 24/043 . . {Mixtures of macromolecular materials}
- 24/046 . . {obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds ([A61L 24/043](#) takes precedence)}
- 24/06 . . obtained by reactions only involving carbon-to-carbon unsaturated bonds {([A61L 24/043](#), [A61L 24/046](#) take precedence)}
- 24/08 . . Polysaccharides {([A61L 24/043](#) takes precedence)}
- 24/10 . . Polypeptides; Proteins {([A61L 24/043](#) takes precedence)}
- 24/102 . . . {Collagen}
- 24/104 . . . {Gelatin}
- 24/106 . . . {Fibrin; Fibrinogen}
- 24/108 . . . {Specific proteins or polypeptides not covered by groups [A61L 24/102](#) - [A61L 24/106](#)}
- 24/12 . . Ionomer cements, e.g. glass-ionomer cements {([A61L 24/043](#) takes precedence)}

26/00 Chemical aspects of, or use of materials for, {wound dressings or} bandages {in liquid, gel or powder form}

NOTES

1. When classifying in group [A61L 26/00](#), classification is also made in [A61L 33/00](#) if the materials used are antithrombogenic.
2. In groups [A61L 26/00](#) - [A61L 26/0095](#), the use of specific polymers is indicated using the relevant combination set symbol, adding, after the symbol in [A61L](#), the correspondent symbol of the polymer in subclass [C08L](#), e.g. liquid bandages on alginates: [A61L 26/0023](#), [C08L 5/04](#)

- 26/0004 . {containing inorganic materials}
- 26/0009 . {containing macromolecular materials}
- 26/0014 . . {obtained by reactions only involving carbon-to-carbon unsaturated bonds}
- 26/0019 . . {obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds}
- 26/0023 . . {Polysaccharides}
- 26/0028 . . {Polypeptides; Proteins; Degradation products thereof}
- 26/0033 . . . {Collagen}
- 26/0038 . . . {Gelatin}
- 26/0042 . . . {Fibrin; Fibrinogen}
- 26/0047 . . . {Specific proteins or polypeptides not covered by groups [A61L 26/0033](#) - [A61L 26/0042](#)}
- 26/0052 . . {Mixtures of macromolecular compounds}
- 26/0057 . {Ingredients of undetermined constitution or reaction products thereof}
- 26/0061 . {Use of materials characterised by their function or physical properties}

- 26/0066 . . {Medicaments; Biocides}
- 26/0071 . . {Plasticisers}
- 26/0076 . . {Sprayable compositions}
- 26/008 . . {Hydrogels or hydrocolloids}
- 26/0085 . . {Porous materials, e.g. foams or sponges}
- 26/009 . . {Materials resorbable by the body}
- 26/0095 . {Composite materials, i.e. containing one material dispersed in amatrix of the same or different material}

27/00 Materials for {grafts or} prostheses or for coating {grafts or} prostheses (dental prostheses [A61C 13/00](#); shape or structure of prostheses [A61F 2/00](#); use of preparations for artificial teeth [A61K 6/02](#); artificial kidneys [A61M 1/14](#))

NOTES

1. In groups [A61L 27/02](#) - [A61L 27/48](#), in the absence of an indication to the contrary, classification is made in the last appropriate place
2. When classifying in groups [A61L 27/02](#) - [A61L 27/48](#), classification is also made in groups [A61L 27/50](#) - [A61L 27/60](#) if the use of materials characterised by their function or physical properties is of interest
3. When classifying in group [A61L 27/00](#), classification is also made in [A61L 33/00](#) if the materials used are antithrombogenic
4. In group [A61L 27/00](#), the use of specific polymers is indicated using the relevant classification symbols of subclass [C08L](#) in the second position of the combination set, e.g. prosthesis based on polyvinylchloride [A61L 27/16](#), [C08L 27/06](#)

- 27/02 . Inorganic materials
- 27/025 . . {Other specific inorganic materials not covered by [A61L 27/04](#) - [A61L 27/12](#)}
- 27/04 . . Metals or alloys
- 27/042 . . . {Iron or iron alloys}
- 27/045 . . . {Cobalt or cobalt alloys}
- 27/047 . . . {Other specific metals or alloys not covered by [A61L 27/042](#) - [A61L 27/045](#) or [A61L 27/06](#)}
- 27/06 . . . Titanium or titanium alloys
- 27/08 . . Carbon; {Graphite}
- 27/10 . . Ceramics or glasses
- 27/105 . . . {containing Al_2O_3 }
- 27/12 . . Phosphorus-containing materials, e.g. apatite
- 27/14 . Macromolecular materials
- 27/16 . . obtained by reactions only involving carbon-to-carbon unsaturated bonds
- 27/165 . . . {Rubbers}
- 27/18 . . obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 27/20 . . Polysaccharides
- 27/22 . . Polypeptides or derivatives thereof, {e.g. degradation products}
- 27/222 . . . {Gelatin}
- 27/225 . . . {Fibrin; Fibrinogen}
- 27/227 . . . {Other specific proteins or polypeptides not covered by [A61L 27/222](#), [A61L 27/225](#) or [A61L 27/24](#)}
- 27/24 . . . Collagen
- 27/26 . . Mixtures of macromolecular compounds
- 27/28 . Materials for coating prostheses

- 27/30 . . Inorganic materials
- 27/303 . . . {Carbon}
- 27/306 . . . {Other specific inorganic materials not covered by [A61L 27/303](#) - [A61L 27/32](#)}
- 27/32 . . . Phosphorus-containing materials, e.g. apatite
- 27/34 . . Macromolecular materials
- 27/36 . containing ingredients of undetermined constitution or reaction products thereof, {e.g. transplant tissue, natural bone, extracellular matrix ([isolated natural compounds](#), e.g. collagen [A61L 27/24](#))}
- 27/3604 . . {characterised by the human or animal origin of the biological material, e.g. hair, fascia, fish scales, silk, shellac, pericardium, pleura, renal tissue, amniotic membrane, parenchymal tissue, fetal tissue, muscle tissue, fat tissue, enamel}
- 27/3608 . . . {Bone, e.g. demineralised bone matrix [DBM], bone powder}
- 27/3612 . . . {Cartilage, synovial fluid}
- 27/3616 . . . {Blood, e.g. platelet-rich plasma}
- 27/362 . . . {Skin, e.g. dermal papillae}
- 27/3625 . . . {Vascular tissue, e.g. heart valves}
- 27/3629 . . . {Intestinal tissue, e.g. small intestinal submucosa}
- 27/3633 . . . {Extracellular matrix [ECM]}
- 27/3637 . . {characterised by the origin of the biological material other than human or animal, e.g. plant extracts, algae}
- 27/3641 . . {characterised by the site of application in the body ([materials for artificial blood vessels A61L 27/507](#); [materials for use in artificial skin A61L 27/60](#))}
- 27/3645 . . . {Connective tissue}
- 27/365 {Bones}
- 27/3654 {Cartilage, e.g. meniscus}
- 27/3658 {Intervertebral discs ([mechanical aspects and structures of intervertebral discs A61F 2/442](#))}
- 27/3662 {Ligaments, tendons}
- 27/3666 . . . {Epithelial tissues other than skin}
- 27/367 . . . {Muscle tissue, e.g. sphincter}
- 27/3675 . . . {Nerve tissue, e.g. brain, spinal cord, nerves, dura mater}
- 27/3679 . . . {Hollow organs, e.g. bladder, esophagus, urether, uterus, intestine}
- 27/3683 . . {subjected to a specific treatment prior to implantation, e.g. decellularising, demineralising, grinding, cellular disruption/non-collagenous protein removal, anti-calcification, crosslinking, supercritical fluid extraction, enzyme treatment}
- 27/3687 . . . {characterised by the use of chemical agents in the treatment, e.g. specific enzymes, detergents, capping agents, crosslinkers, anticalcification agents}
- 27/3691 . . . {characterised by physical conditions of the treatment, e.g. applying a compressive force to the composition, pressure cycles, ultrasonic/sonication or microwave treatment, lyophilisation}
- 27/3695 . . . {characterised by the function or physical properties of the final product, where no specific conditions are defined to achieve this ([A61L 27/3687](#), [A61L 27/3691 take precedence](#))}
- 27/38 . . . {containing added animal cells ([organs or tissue containing native cells A61L 27/36](#))}
- 27/3804 {characterised by specific cells or progenitors thereof, e.g. fibroblasts, connective tissue cells, kidney cells}
- 27/3808 {Endothelial cells}
- 27/3813 {Epithelial cells, e.g. keratinocytes, urothelial cells}
- 27/3817 {Cartilage-forming cells, e.g. pre-chondrocytes}
- 27/3821 {Bone-forming cells, e.g. osteoblasts, osteocytes, osteoprogenitor cells}
- 27/3826 {Muscle cells, e.g. smooth muscle cells}
- 27/383 {Nerve cells, e.g. dendritic cells, Schwann cells}
- 27/3834 {Cells able to produce different cell types, e.g. hematopoietic stem cells, mesenchymal stem cells, marrow stromal cells, embryonic stem cells}
- 27/3839 {characterised by the site of application in the body ([materials for artificial blood vessels A61L 27/507](#); [materials for use in artificial skin A61L 27/60](#))}
- 27/3843 {Connective tissue}
- 27/3847 {Bones}
- 27/3852 {Cartilage, e.g. meniscus}
- 27/3856 {Intervertebral discs ([mechanical aspects and structures of intervertebral discs A61F 2/442](#))}
- 27/386 {Ligaments, tendons}
- 27/3865 {Dental/periodontal tissues}
- 27/3869 {Epithelial tissues other than skin}
- 27/3873 {Muscle tissue, e.g. sphincter}
- 27/3878 {Nerve tissue, brain, spinal cord, nerves, dura mater}
- 27/3882 {Hollow organs, e.g. bladder, esophagus, urether, uterus}
- 27/3886 {comprising two or more cell types}
- 27/3891 {as distinct cell layers}
- 27/3895 {using specific culture conditions, e.g. stimulating differentiation of stem cells, pulsatile flow conditions}
- 27/40 . . Composite materials, i.e. containing one material dispersed in a matrix of the same or different material
- 27/42 . . . having an inorganic matrix
- 27/422 {of carbon}
- 27/425 {of phosphorus containing material, e.g. apatite}
- 27/427 {of other specific inorganic materials not covered by [A61L 27/422](#) or [A61L 27/425](#)}
- 27/44 . . . having a macromolecular matrix
- 27/443 {with carbon fillers}
- 27/446 {with other specific inorganic fillers other than those covered by [A61L 27/443](#) or [A61L 27/46](#)}
- 27/46 with phosphorus-containing inorganic fillers
- 27/48 with macromolecular fillers
- 27/50 . . Materials characterised by their function or physical properties, {e.g. injectable or lubricating compositions, shape-memory materials, surface modified materials}
- 27/502 . . . {Plasticizers}
- 27/505 . . . {Stabilizers}

- 27/507 . . {for artificial blood vessels (apparatus for applying cells on a blood vessel prosthesis [A61F 2/062](#))}
- 27/52 . . Hydrogels or hydrocolloids
- 27/54 . . Biologically active materials, e.g. therapeutic substances {(A61L 27/227 takes precedence)}
- 27/56 . . Porous materials, {e.g. foams or sponges}
- 27/58 . . Materials at least partially resorbable by the body
- 27/60 . . Materials for use in artificial skin

28/00 Materials for colostomy devices (adhesives for colostomy devices [A61L 24/00](#))

NOTE

When classifying in group [A61L 28/00](#), classification is also made in [A61L 33/00](#) if the materials used are antithrombogenic.

- 28/0003 . {containing inorganic materials}
- 28/0007 . {containing macromolecular materials}
- 28/0011 . . {obtained by reactions only involving carbon-to-carbon unsaturated bonds}
- 28/0015 . . {obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds}
- 28/0019 . . {Polysaccharides}
- 28/0023 . . {Polypeptides; Proteins; Degradation products thereof}
- 28/0026 . . {Mixtures of macromolecular compounds}
- 28/003 . {Ingredients of undetermined constitution or reaction products thereof}
- 28/0034 . {Use of materials characterised by their function or physical properties}
- 28/0038 . . {Medicaments; Biocides}
- 28/0042 . . {Plasticisers}
- 28/0046 . . {Sprayable compositions}
- 28/0049 . . {Hydrogels or hydrocolloids}
- 28/0053 . . {Porous materials, e.g. foams or sponges}
- 28/0057 . . {Materials resorbable by the body}
- 28/0061 . {Materials for coating}
- 28/0065 . . {Inorganic materials}
- 28/0069 . . {Macromolecular materials}
- 28/0073 . {Composite materials, i.e. containing one material dispersed in a matrix of the same or different material}
- 28/0076 . . {with an inorganic matrix}
- 28/008 . . {with a macromolecular matrix}
- 28/0084 . . . {containing fillers of carbon}
- 28/0088 . . . {containing fillers of phosphorus-containing inorganic compounds}
- 28/0092 . . . {containing inorganic fillers not covered by groups [A61L 28/0084](#) or [A61L 28/0088](#)}
- 28/0096 . . . {containing macromolecular fillers}

29/00 Materials for catheters, {medical tubing, cannulae, or endoscopes} or for coating catheters (shape or structure of catheters [A61M 25/00](#))

NOTES

1. In groups [A61L 29/02](#) - {[A61L 29/126](#)} , in the absence of an indication to the contrary, classification is made in the last appropriate place
2. When classifying in groups [A61L 29/02](#) - {[A61L 29/126](#)} , classification is also made in groups [A61L 29/14](#) - [A61L 29/18](#) if

- the use of materials characterised by their function or physical properties is of interest
- 3. When classifying in group [A61L 29/00](#), classification is also made in [A61L 33/00](#) if the materials used are antithrombogenic
- 4. In group [A61L 29/00](#), the use of specific polymers is indicated using the relevant classification symbols of subclass [C08L](#) in the combination set, e.g. a catheter based on polyvinylchloride [A61L 29/041](#), [C08L 27/06](#)

- 29/005 . {Ingredients of undetermined constitution or reaction products thereof}
- 29/02 . Inorganic materials
- 29/04 . Macromolecular materials
- 29/041 . . {obtained by reactions only involving carbon-to-carbon unsaturated bonds}
- 29/042 . . . {Rubbers}
- 29/043 . . {Polysaccharides}
- 29/044 . . {Proteins; Polypeptides; Degradation products thereof}
- 29/045 . . . {Collagen}
- 29/046 . . . {Gelatin}
- 29/047 . . . {Fibrin; Fibrinogen}
- 29/048 . . . {Other specific proteins or polypeptides not covered by [A61L 29/045](#) - [A61L 29/047](#)}
- 29/049 . . {Mixtures of macromolecular compounds}
- 29/06 . . obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 29/08 . Materials for coatings
- 29/085 . . {Macromolecular materials}
- 29/10 . . Inorganic materials
- 29/103 . . . {Carbon}
- 29/106 . . . {Inorganic materials other than carbon}
- 29/12 . Composite materials, i.e. containing one material dispersed in a matrix of the same or different material
- 29/123 . . {having an inorganic matrix}
- 29/126 . . {having a macromolecular matrix}
- 29/14 . Materials characterised by their function or physical properties, {e.g. lubricating compositions}
- 29/141 . . {Plasticizers}
- 29/143 . . {Stabilizers}
- 29/145 . . {Hydrogels or hydrocolloids}
- 29/146 . . {Porous materials, e.g. foams or sponges}
- 29/148 . . {Materials at least partially resorbable by the body}
- 29/16 . . Biologically active materials, e.g. therapeutic substances {(A61L 29/048 takes precedence)}
- 29/18 . . Materials at least partially X-ray or laser opaque

31/00 Materials for other surgical articles, {e.g. stents, stent-grafts, shunts, surgical drapes, guide wires, materials for adhesion prevention, occluding devices, surgical gloves, tissue fixation devices (shape or structure of stent-grafts [A61F 2/07](#), of stents [A61F 2/82](#), of surgical gloves [A61B 42/00](#), of surgical drapes [A61B 46/00](#), of occluding devices [A61B 17/12022](#))}

NOTES

1. In groups [A61L 31/02](#) - {[A61L 31/129](#)} , in the absence of an indication to the contrary, classification is made in the last appropriate place

A61L 31/00 (continued)	2. When classifying in groups A61L 31/02 - A61L 31/129 , classification is also made in groups A61L 31/14 - A61L 31/18 if the use of materials characterised by their function or physical properties is of interest	31/14	. Materials characterised by their function or physical properties, {e.g. injectable or lubricating compositions, shape-memory materials, surface modified materials}
	3. When classifying in group A61L 31/00 , classification is also made in A61L 33/00 if the materials used are antithrombogenic	31/141	. . {Plasticizers}
	4. In group A61L 31/00 , the use of specific polymers is indicated using the relevant classification symbols of subclass C08L in the second position of the combination set, e.g. surgical clamp based on polyvinylchloride A61L 31/048 , C08L 27/06	31/143	. . {Stabilizers}
31/005	. {Ingredients of undetermined constitution or reaction products thereof}	31/145	. . {Hydrogels or hydrocolloids}
31/02	. Inorganic materials	31/146	. . {Porous materials, e.g. foams or sponges}
31/022	. . {Metals or alloys}	31/148	. . {Materials at least partially resorbable by the body}
31/024	. . {Carbon; Graphite}	31/16	. . Biologically active materials, e.g. therapeutic substances { (A61L 31/047 takes precedence)}
31/026	. . {Ceramic or ceramic-like structures, e.g. glasses}	31/18	. . Materials at least partially X-ray or laser opaque
31/028	. . {Other inorganic materials not covered by A61L 31/022 - A61L 31/026 }	33/00	Antithrombogenic treatment of surgical articles, e.g. sutures, catheters, prostheses, or of articles for the manipulation or conditioning of blood; Materials for such treatment
31/04	. Macromolecular materials		NOTES
31/041	. . {Mixtures of macromolecular compounds}		1. In groups A61L 33/0076 - A61L 33/0094 and A61L 33/02 - A61L 33/122 , in the absence of an indication to the contrary, classification is made in the last appropriate place
31/042	. . {Polysaccharides}		2. When classifying in groups A61L 33/02 - A61L 33/122 , classification is also made in group A61L 33/0005 if of interest
31/043	. . {Proteins; Polypeptides; Degradation products thereof}		3. In group A61L 33/00 , the use of specific polymers is indicated using the relevant classification symbols of subclass C08L in the second position of the combination set, e.g. antithrombogenic treatment with the help of polyvinylchloride A61L 33/064 , C08L 27/06
31/044	. . . {Collagen}	33/0005	. {Use of materials characterised by their function or physical properties}
31/045	. . . {Gelatin}	33/0011	. . {Anticoagulant, e.g. heparin, platelet aggregation inhibitor, fibrinolytic agent, other than enzymes, attached to the substrate}
31/046	. . . {Fibrin; Fibrinogen}	33/0017	. . . {using a surface active agent}
31/047	. . . {Other specific proteins or polypeptides not covered by A61L 31/044 - A61L 31/046 }	33/0023	. . . {using a quaternized group or a protonated amine group of the substrate}
31/048	. . {obtained by reactions only involving carbon-to-carbon unsaturated bonds (A61L 31/041 takes precedence)}	33/0029	. . . {using an intermediate layer of polymer}
31/049	. . . {Rubbers}	33/0035	. . . {using a polymer with positively charged atoms in the polymeric backbone, e.g. ionenes}
31/06	. . obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds {(A61L 31/041 takes precedence)}	33/0041	. . . {characterised by the choice of an antithrombotic agent other than heparin (heparinoid A61L 33/08 ; polypeptides A61L 33/12)}
31/08	. Materials for coatings	33/0047	. . {Enzymes, e.g. urokinase, streptokinase}
31/082	. . {Inorganic materials}	33/0052	. . {Plasticizers}
31/084	. . . {Carbon; Graphite}	33/0058	. . {Stabilizers}
31/086	. . . {Phosphorus-containing materials, e.g. apatite}	33/0064	. . {Hydrogels or hydrocolloids}
31/088	. . . {Other specific inorganic materials not covered by A61L 31/084 or A61L 31/086 }	33/007	. . {Porous materials, e.g. foams or sponges}
31/10	. . Macromolecular material	33/0076	. {Chemical modification of the substrate}
31/12	. Composite materials, i.e. containing one material dispersed in a matrix of the same or different material	33/0082	. . {by reacting with an organic compound other than heparin}
31/121	. . {having an inorganic matrix}	33/0088	. . {by grafting of a monomer onto the substrate}
31/122	. . . {of carbon}	33/0094	. {Physical treatment, e.g. plasma treatment}
31/123	. . . {of phosphorus-containing materials, e.g. apatite}	33/02	. Use of inorganic materials
31/124	. . . {of other specific inorganic materials not covered by A61L 31/122 or A61L 31/123 }	33/022	. . {Metal or alloys}
31/125	. . {having a macromolecular matrix}	33/025	. . {Carbon; Graphite}
31/126	. . . {containing carbon fillers}	33/027	. . {Other specific inorganic materials not covered by A61L 33/022 or A61L 33/025 }
31/127	. . . {containing fillers of phosphorus-containing inorganic materials}	33/04	. Use of organic materials, e.g. acetylsalicylic acid
31/128	. . . {containing other specific inorganic fillers not covered by A61L 31/126 or A61L 31/127 }		
31/129	. . . {containing macromolecular fillers}		

33/06	Use of macromolecular materials (grafting of a monomer onto the substrate A61L 33/0088)	2209/13	Dispensing or storing means for active compounds
33/062	{Mixtures of macromolecular compounds}	2209/131	Semi-permeable membranes
33/064	{obtained by reactions only involving carbon-to-carbon unsaturated bonds (A61L 33/062 takes precedence)}	2209/132	Piezo or ultrasonic elements for dispensing
33/066	{Rubbers}	2209/133	Replaceable cartridges, refills
33/068	{obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds (A61L 33/062 takes precedence)}	2209/134	Distributing means, e.g. baffles, valves, manifolds, nozzles
33/08	Polysaccharides	2209/135	Vaporisers for active components
33/12	Polypeptides, proteins or derivatives thereof, {e.g. degradation products thereof}	2209/14	Filtering means
33/122	{Collagen}	2209/15	Supporting means, e.g. stands, hooks, holes for hanging
33/124	{Gelatin}	2209/16	Connections to a HVAC unit
33/126	{Fibrin}	2209/20	Method-related aspects
33/128	{Other specific proteins or polypeptides not covered by A61L 33/122 - A61L 33/126 }	2209/21	Use of chemical compounds for treating air or the like
33/18	Use of ingredients of undetermined constitution or reaction products thereof	2209/211	Use of hydrogen peroxide, liquid and vaporous
		2209/212	Use of ozone, e.g. generated by UV radiation or electrical discharge
		2209/213	Use of electrochemically treated water, e.g. electrolysed water or water treated by electrical discharge
		2209/22	Treatment by sorption, e.g. absorption, adsorption, chemisorption, scrubbing, wet cleaning
2202/00	Aspects relating to methods or apparatus for disinfecting or sterilising materials or objects	2300/00	Biologically active materials used in bandages, wound dressings, absorbent pads or medical devices
2202/10	Apparatus features	2300/10	containing or releasing inorganic materials
2202/11	Apparatus for generating biocidal substances, e.g. vaporisers, UV lamps	2300/102	Metals or metal compounds, e.g. salts such as bicarbonates, carbonates, oxides, zeolites, silicates
2202/12	Apparatus for isolating biocidal substances from the environment	2300/104	Silver, e.g. silver sulfadiazine
2202/121	Sealings, e.g. doors, covers, valves, sluices	2300/106	Halogens or compounds thereof, e.g. iodine, chlorite
2202/122	Chambers for sterilisation	2300/108	Elemental carbon, e.g. charcoal
2202/123	Connecting means	2300/11	Peroxy compounds, peroxides, e.g. hydrogen peroxide
2202/13	Biocide decomposition means, e.g. catalysts, sorbents	2300/112	Phosphorus-containing compounds, e.g. phosphates, phosphonates
2202/14	Means for controlling sterilisation processes, data processing, presentation and storage means, e.g. sensors, controllers, programs	2300/114	Nitric oxide, i.e. NO
2202/15	Biocide distribution means, e.g. nozzles, pumps, manifolds, fans, baffles, sprayers	2300/20	containing or releasing organic materials
2202/16	Mobile applications, e.g. portable devices, trailers, devices mounted on vehicles	2300/202	with halogen atoms, e.g. triclosan, povidone-iodine
2202/17	Combination with washing or cleaning means	2300/204	with nitrogen-containing functional groups, e.g. aminoxides, nitriles, guanidines
2202/18	Aseptic storing means	2300/206	Biguanides, e.g. chlorohexidine
2202/181	Flexible packaging means, e.g. permeable membranes, paper	2300/208	Quaternary ammonium compounds
2202/182	Rigid packaging means	2300/21	Acids
2202/20	Targets to be treated	2300/212	Peroxy acids, peracids
2202/21	Pharmaceuticals, e.g. medicaments, artificial body parts	2300/214	Amino acids
2202/22	Blood or products thereof	2300/216	with other specific functional groups, e.g. aldehydes, ketones, phenols, quaternary phosphonium groups
2202/23	Containers, e.g. vials, bottles, syringes, mail	2300/22	Lipids, fatty acids, e.g. prostaglandins, oils, fats, waxes
2202/24	Medical instruments, e.g. endoscopes, catheters, sharps	2300/222	Steroids, e.g. corticosteroids
2202/25	Rooms in buildings, passenger compartments	2300/224	containing metals, e.g. porphyrins, vitamin B12
2202/26	Textiles, e.g. towels, beds, cloths	2300/23	Carbohydrates
2209/00	Aspects relating to disinfection, sterilisation or deodorisation of air	2300/232	Monosaccharides, disaccharides, polysaccharides, lipopolysaccharides
2209/10	Apparatus features	2300/236	Glycosaminoglycans, e.g. heparin, hyaluronic acid, chondroitin
2209/11	Apparatus for controlling air treatment		
2209/111	Sensor means, e.g. motion, brightness, scent, contaminant sensors		
2209/12	Lighting means		

- 2300/25 . . Peptides having up to 20 amino acids in a defined sequence
- 2300/252 . . Polypeptides, proteins, e.g. glycoproteins, lipoproteins, cytokines
- 2300/254 . . . Enzymes, proenzymes
- 2300/256 . . . Antibodies, e.g. immunoglobulins, vaccines
- 2300/258 . . Genetic materials, DNA, RNA, genes, vectors, e.g. plasmids
- 2300/30 . . Compounds of undetermined constitution extracted from natural sources, e.g. Aloe Vera
- 2300/40 . characterised by a specific therapeutic activity or mode of action
- 2300/402 . . Anaesthetics, analgesics, e.g. lidocaine
- 2300/404 . . Biocides, antimicrobial agents, antiseptic agents
- 2300/406 . . . Antibiotics
- 2300/408 . . . Virucides, spermicides
- 2300/41 . . Anti-inflammatory agents, e.g. NSAIDs
- 2300/412 . . Tissue-regenerating or healing or proliferative agents
- 2300/414 . . . Growth factors
- 2300/416 . . Anti-neoplastic or anti-proliferative or anti-restenosis or anti-angiogenic agents, e.g. paclitaxel, sirolimus
- 2300/418 . . Agents promoting blood coagulation, blood-clotting agents, embolising agents
- 2300/42 . . Anti-thrombotic agents, anticoagulants, anti-platelet agents
- 2300/422 . . Anti-atherosclerotic agents
- 2300/424 . . Anti-adhesion agents
- 2300/426 . . Immunomodulating agents, i.e. cytokines, interleukins, interferons
- 2300/428 . . Vitamins, e.g. tocopherol, riboflavin
- 2300/43 . . Hormones, e.g. dexamethasone
- 2300/432 . . Inhibitors, antagonists
([A61L 2300/402](#) - [A61L 2300/43](#) take precedence)
- 2300/434 . . . of enzymes
- 2300/436 . . . of receptors
- 2300/438 . . Antigens
- 2300/44 . . Radioisotopes, radionuclides
- 2300/442 . . Colorants, dyes
- 2300/45 . . Mixtures of two or more drugs, e.g. synergistic mixtures
- 2300/452 . . Lubricants
- 2300/60 . characterised by a special physical form
- 2300/602 . . Type of release, e.g. controlled, sustained, slow
- 2300/604 . . . Biodegradation
- 2300/606 . . Coatings
- 2300/608 . . . having two or more layers
- 2300/61 containing two or more active agents in different layers
- 2300/62 . . Encapsulated active agents, e.g. emulsified droplets
- 2300/622 . . . Microcapsules
- 2300/624 . . . Nanocapsules
- 2300/626 . . . Liposomes, micelles, vesicles
- 2300/63 . . Crystals
- 2300/64 . . Animal cells
- 2300/80 . characterised by a special chemical form
- 2300/802 . . Additives, excipients, e.g. cyclodextrins, fatty acids, surfactants
- 2400/00 Materials characterised by their function or physical properties**
- 2400/02 . Treatment of implants to prevent calcification or mineralisation in vivo
- 2400/04 . Materials for stopping bleeding
- 2400/06 . Flowable or injectable implant compositions
- 2400/08 . Methods for forming porous structures using a negative form which is filled and then removed by pyrolysis or dissolution
- 2400/10 . Materials for lubricating medical devices
- 2400/12 . Nanosized materials, e.g. nanofibres, nanoparticles, nanowires, nanotubes; Nanostructured surfaces
- 2400/14 . Adhesives for ostomy devices
- 2400/16 . Materials with shape-memory or superelastic properties
- 2400/18 . Modification of implant surfaces in order to improve biocompatibility, cell growth, fixation of biomolecules, e.g. plasma treatment
- 2420/00 Materials or methods for coatings medical devices**
- 2420/02 . Methods for coating medical devices
- 2420/04 . Coatings containing a composite material such as inorganic/organic, i.e. material comprising different phases
- 2420/06 . Coatings containing a mixture of two or more compounds
- 2420/08 . Coatings comprising two or more layers
- 2430/00 Materials or treatment for tissue regeneration**
- 2430/02 . for reconstruction of bones; weight-bearing implants
- 2430/04 . for mammary reconstruction
- 2430/06 . for cartilage reconstruction, e.g. meniscus
- 2430/10 . for reconstruction of tendons or ligaments
- 2430/12 . for dental implants or prostheses
- 2430/14 . for ear reconstruction or ear implants, e.g. implantable hearing aids
- 2430/16 . for reconstruction of eye parts, e.g. intraocular lens, cornea
- 2430/18 . for hair reconstruction
- 2430/20 . for reconstruction of the heart, e.g. heart valves
- 2430/22 . for reconstruction of hollow organs, e.g. bladder, esophagus, urether, uterus
- 2430/24 . for joint reconstruction
- 2430/26 . for kidney reconstruction
- 2430/28 . for liver reconstruction
- 2430/30 . for muscle reconstruction
- 2430/32 . for nerve reconstruction
- 2430/34 . for soft tissue reconstruction
- 2430/36 . for embolization or occlusion, e.g. vaso-occlusive compositions or devices ([artificial blood vessels A61L 27/507](#))
- 2430/38 . for reconstruction of the spine, vertebrae or intervertebral discs
- 2430/40 . Preparation and treatment of biological tissue for implantation, e.g. decellularisation, cross-linking