

CPC**COOPERATIVE PATENT CLASSIFICATION****B29B****PREPARATION OR PRETREATMENT OF THE MATERIAL TO BE SHAPED; MAKING GRANULES OR PREFORMS; RECOVERY OF PLASTICS OR OTHER CONSTITUENTS OF WASTE MATERIAL CONTAINING PLASTICS****B29B 7/00**

Mixing; Kneading ([for preparation of dough A21C 1/00;](#) in general [B01F](#); combined with calendering [B29C 43/24](#), with injection [B29C 45/46](#), with extrusion [B29C 47/36](#))

B29B 7/002

- [{Methods \(chemical aspects C08J 3/00\)}](#)

B29B 7/005

- • [{for mixing in batches}](#)

B29B 7/007

- • [{for continuous mixing}](#)

B29B 7/02

- non-continuous, with mechanical mixing or kneading devices, i.e. batch type

B29B 7/04

- • with non-movable mixing or kneading devices

B29B 7/06

- • with movable mixing or kneading devices

B29B 7/08

- • • shaking, oscillating or vibrating

B29B 7/085

- • • • [{by means of axially movable pistons}](#)

B29B 7/10

- • • rotary

B29B 7/103

- • • • [{with rollers or the like in casings}](#)

B29B 7/106

- • • • [{using rotary casings}](#)

B29B 7/12

- • • • with single shaft

B29B 7/125

- • • • • [{having a casing closely surrounding the rotor, e.g. for masticating rubber \(with more than one shaft B29B 7/183\); Rotors therefor \(B29B 7/14, B29B 7/16 take precedence\)}](#)

B29B 7/14

- • • • • with screw or helix

B29B 7/16

- • • • • with paddles or arms

B29B 7/18

- • • • with more than one shaft

B29B 7/183

- • • • • [{having a casing closely surrounding the rotors, e.g. of Banbury type \(with single shaft B29B 7/125\)}](#)

B29B 7/186

- • • • • [{Rotors therefor}](#)

B29B 7/20

- • • • • with intermeshing devices, e.g. screws

B29B 7/22

- • Component parts, details or accessories; Auxiliary operations

B29B 7/24

- • • for feeding

B29B 7/242

- • • • [{in measured doses}](#)

B29B 7/244

- • • • • [{of several materials}](#)

B29B 7/246

- • • • [{in mixers having more than one rotor and a casing closely surrounding the rotors, e.g. with feeding plungers}](#)

B29B 7/248

- • • • [{with plungers for introducing the material, e.g. from below \(B29B 7/246 takes precedence\)}](#)

B29B 7/26

- • • for discharging, e.g. doors

B29B 7/263

- • • • [{from the underside in mixers having more than one rotor and a casing closely surrounding the rotors}](#)

B29B 7/266	. . . . . {using sliding doors}
B29B 7/28	. . . for measuring, controlling or regulating, e.g. viscosity control {(B29B 7/242 takes precedence)}
B29B 7/283	. . . . {measuring data of the driving system, e.g. torque, speed, power}
B29B 7/286	. . . . {measuring properties of the mixture, e.g. temperature, density (B29B 7/283 takes precedence)}
B29B 7/30	. continuous, with mechanical mixing or kneading devices
B29B 7/32	. . with non-movable mixing or kneading devices
B29B 7/325	. . . {Static mixers (in general B01F 5/0602)}
B29B 7/34	. . with movable mixing or kneading devices
B29B 7/36	. . . shaking, oscillating or vibrating
B29B 7/365	. . . . {by means of axially movable pistons}
B29B 7/38	. . . rotary (B29B 7/52 takes precedence)
B29B 7/385	. . . . {fluid mixers}
B29B 7/40	. . . . with single shaft
B29B 7/401	. . . . . {having a casing closely surrounding the rotor, e.g. with a plunger for feeding the material (B29B 7/407, B29B 7/42 take precedence)}
B29B 7/402	. . . . . {using a rotor-stator system with intermeshing elements, e.g. teeth (B29B 7/408, B29B 7/404 take precedence)}
B29B 7/404	. . . . . {with feeding or valve actuating means, e.g. with cleaning means}
B29B 7/405	. . . . . {Mixing heads (B29B 7/404, B29B 7/42 take precedence; mixing heads without moving stirrer B29B 7/7457)}
B29B 7/407	. . . . . . {with a casing closely surrounding the rotor, e.g. with conical rotor}
B29B 7/408	. . . . . . {with mixing elements on a rotor co-operating with mixing elements, perpendicular to the axis of the rotor, fixed on a stator}
B29B 7/42	. . . . . with screw or helix
B29B 7/421	. . . . . . {with screw and additionally other mixing elements on the same shaft, e.g. paddles, discs, bearings, rotor blades of the Banbury type}
B29B 7/422	. . . . . . {with screw sections co-operating, e.g. intermeshing, with elements on the wall of the surrounding casing}
B29B 7/423	. . . . . . . {and oscillating axially (in general B01F 11/0057)}
B29B 7/424	. . . . . . {with conical screw surrounded by conical casing}
B29B 7/425	. . . . . . {with screw surrounded by a casing provided with grooves or cavities}
B29B 7/426	. . . . . . {with consecutive casings or screws, e.g. for charging, discharging, mixing}
B29B 7/427	. . . . . . {with independently driven screws rotating about the same axis, e.g. oscillating axially; with axially oscillating screws (B29B 7/423 takes precedence)}
B29B 7/428	. . . . . . {Parts or accessories, e.g. casings, feeding or discharging means}
B29B 7/429	. . . . . . . {Screws (B29B 7/421 takes precedence)}

B29B 7/44	. . . . .	with paddles or arms
B29B 7/46	. . . . .	with more than one shaft
B29B 7/465	. . . . .	{each shaft comprising rotor parts of the Banbury type in addition to screw parts}
B29B 7/48	. . . . .	with intermeshing devices, e.g. screws
B29B 7/481	. . . . .	{provided with paddles, gears or discs (B29B 7/482 takes precedence)}
B29B 7/482	. . . . .	{provided with screw parts in addition to other mixing parts, e.g. paddles, gears, discs}
B29B 7/483	. . . . .	{the other mixing parts being discs perpendicular to the screw axis}
B29B 7/484	. . . . .	{with two shafts provided with screws, e.g. one screw being shorter than the other (B29B 7/482 takes precedence)}
B29B 7/485	. . . . .	{with three or more shafts provided with screws}
B29B 7/486	. . . . .	{with screws surrounded by a casing provided with grooves or cavities}
B29B 7/487	. . . . .	{with consecutive casings or screws, e.g. for feeding, discharging, mixing}
B29B 7/488	. . . . .	{Parts, e.g. casings, sealings; Accessories, e.g. flow controlling or throttling devices (discharging B29B 7/582 ; feeding B29B 7/60)}
B29B 7/489	. . . . .	{Screws (B29B 7/482 takes precedence)}
B29B 7/50	. . . . .	with rotary casing
B29B 7/52	. . . . .	with rollers or the like, e.g. calenders
B29B 7/523	. . . . .	{co-operating with casings}
B29B 7/526	. . . . .	{with two or more rollers}
B29B 7/54	. . . . .	with a single roller co-operating with a stationary member {other than the casing}
B29B 7/56	. . . . .	with co-operating rollers {e.g. with repeated action, i.e. the material leaving a set of rollers being reconducted to the same set or being conducted to a next set}
B29B 7/562	. . . . .	{with means for axially moving the material on the rollers}
B29B 7/564	. . . . .	{at least one of the rollers being provided with helicoidal grooves or ridges, e.g. followed by axial extrusion}
B29B 7/566	. . . . .	{provided with means to take material away from a set of rollers and to reconduct it to the same set; provided with endless belts, e.g. which can be in or out of cooperation with at least one of the rollers}
B29B 7/568	. . . . .	{with consecutive sets of rollers or a train of rollers}
B29B 7/58	. . . . .	Component parts, details or accessories; Auxiliary operations
B29B 7/582	. . . . .	{for discharging, e.g. doors}
B29B 7/584	. . . . .	{for mixers with rollers, e.g. wedges, guides, pressing means, thermal conditioning}
B29B 7/586	. . . . .	{Drives}

- B29B 7/588 {cutting devices, e.g. movable cutting devices (scrapers for stripping the material from rollers [B29B 7/645](#))}
- B29B 7/60 . . . for feeding, e.g. end guides for the incoming material {(B29B 7/7615 takes precedence; feeding predetermined amounts for mixing in general [B01F 15/0216](#))}
- B29B 7/603 {in measured doses, e.g. proportioning of several materials}
- B29B 7/606 {specially adapted for feeding calenders or the like}
- B29B 7/62 . . . Rollers, e.g. with grooves ([B29B 7/564](#) takes precedence)
- B29B 7/625 {provided with cooling or heating means}
- B29B 7/64 . . . Stripping the material from the rollers
- B29B 7/645 {by means of a scraper moving in the axial direction of the rollers}
- B29B 7/66 . . . Recycling the material {(B29B 7/566 takes precedence)}
- B29B 7/68 . . . Positioning of rollers
- B29B 7/70 . . . Conditioning of rollers, e.g. cleaning
- B29B 7/72 . . . Measuring, controlling or regulating
- B29B 7/722 {Safety devices}
- B29B 7/724 {for continuous roller mixers, e.g. calenders ([B29B 7/722](#) takes precedence)}
- B29B 7/726 {Measuring properties of mixture, e.g. temperature or density ([B29B 7/724](#) takes precedence)}
- B29B 7/728 {Measuring data of the driving system, e.g. torque, speed, power, vibration ([B29B 7/724](#) takes precedence)}
- B29B 7/74 . . using other mixers or combinations of {mixers, e.g. of} dissimilar mixers; {Plant}
- B29B 7/7404 . . {Mixing devices specially adapted for foamable substances ([B29B 7/76](#) takes precedence)}
- B29B 7/7409 . . . {with supply of gas}
- B29B 7/7414 {with rotatable stirrer, e.g. using an intermeshing rotor-stator system ([B29B 7/7423](#) takes precedence)}
- B29B 7/7419 {with static or injector mixer elements}
- B29B 7/7423 {preceded or followed by rotatable stirring device}
- B29B 7/7428 {Methodical aspects}
- B29B 7/7433 . . . {Plants}
- B29B 7/7438 . . {Mixing guns, i.e. hand-held mixing units having dispensing means ([B29B 7/761](#), [B29B 7/7678](#) take precedence)}
- B29B 7/7442 . . . {with driven stirrer}
- B29B 7/7447 . . . {including means for feeding the components}
- B29B 7/7452 . . . {for mixing components by spraying them into each other; for mixing by intersecting sheets}
- B29B 7/7457 . . {Mixing heads without moving stirrer ([B29B 7/7438](#), [B29B 7/76](#) take precedence)}
- B29B 7/7461 . . {Combinations of dissimilar mixers}
- B29B 7/7466 . . {Combinations of similar mixers}

- B29B 7/7471 . . {Mixers in which the mixing takes place at the inlet of a mould, e.g. mixing chambers situated in the mould opening}
- B29B 7/7476 . . {Systems, i.e. flow charts or diagrams; Plants}
- B29B 7/748 . . . {Plants ([B29B 7/7433](#), [B29B 7/7485](#), [B29B 7/7495](#) take precedence)}
- B29B 7/7485 . . . {with consecutive mixers, e.g. with premixing some of the components}
- B29B 7/749 {with stirring means for the individual components before they are mixed together}
- B29B 7/7495 . . . {for mixing rubber}
- B29B 7/76 . . {Mixers} with stream-impingement mixing head
- B29B 7/7605 . . . {having additional mixing arrangements ([B29B 7/7673](#) takes precedence)}
- B29B 7/761 . . . {of gun-type, i.e. hand-held units having dispensing means ([B29B 7/7678](#) takes precedence)}
- B29B 7/7615 . . . {characterised by arrangements for controlling, measuring or regulating, e.g. for feeding or proportioning the components}
- B29B 7/7621 {involving introducing a gas or another component in at least one of the components}
- B29B 7/7626 {using measuring chambers of piston or plunger type ([B29B 7/7621](#) takes precedence; for mixing in general [B01F 15/0454](#))}
- B29B 7/7631 . . . {Parts; Accessories ([B29B 7/7684](#) takes precedence)}
- B29B 7/7636 {Construction of the feed orifices, bores, ports}
- B29B 7/7642 {Adjustable feed orifices, e.g. for controlling the rate of feeding}
- B29B 7/7647 {Construction of the mixing conduit module or chamber part}
- B29B 7/7652 {Construction of the discharge orifice, opening or nozzle}
- B29B 7/7657 {Adjustable discharge orifices, openings or nozzle openings, e.g. for controlling the rate of dispensing}
- B29B 7/7663 . . . {the mixing head having an outlet tube with a reciprocating plunger, e.g. with the jets impinging in the tube}
- B29B 7/7668 {having a second tube intersecting the first one with the jets impinging in the second tube}
- B29B 7/7673 {having additional mixing arrangements ([B29B 7/7668](#) takes precedence)}
- B29B 7/7678 {of the gun type, i.e. hand-held units}
- B29B 7/7684 {Parts; Accessories}
- B29B 7/7689 {Plunger constructions}
- B29B 7/7694 {comprising recirculation channels; ducts formed in the plunger}
- B29B 7/78 . . by gravity, e.g. falling particle mixers
- B29B 7/80 . . Component parts, details or accessories; Auxiliary operations ([B29B 7/22](#), [B29B 7/58](#) take precedence, {cleaning mixers [B01F 15/00019](#)})
- B29B 7/801 . . {Valves}
- B29B 7/802 . . {Constructions or methods for cleaning the mixing or kneading device (cleaning in general [B08B](#))}
- B29B 7/803 . . . {Cleaning of mixers of the gun type, stream-impingement type, mixing heads}

- B29B 7/805 {Cleaning of the mixing conduit, module or chamber part}
- B29B 7/806 {Cleaning of the discharge opening, e.g. orifice of the dispenser}
- B29B 7/807 {Cleaning of the central body of the plunger}
- B29B 7/808 {Cleaning of the plunger tip}
- B29B 7/82 . . Heating or cooling
- B29B 7/823 . . . {Temperature control}
- B29B 7/826 . . . {Apparatus therefor}
- B29B 7/84 . . Venting or degassing {;Removing liquids, e.g. by evaporating components}
- B29B 7/842 . . . {Removing liquids in liquid form}
- B29B 7/845 . . . {Venting, degassing or removing evaporated components in devices with rotary stirrers}
- B29B 7/847 {Removing of gaseous components before or after mixing}
- B29B 7/86 . . for working at sub- or superatmospheric pressure {(B01F 13/06 takes precedence)}
- B29B 7/88 . . Adding charges, {i.e. additives}
- B29B 7/885 . . . {with means for treating, e.g. milling, the charges (B29B 7/905 takes precedence)}
- B29B 7/90 . . . Fillers or reinforcements {e.g. fibres}
- B29B 7/905 {with means for pretreatment of the charges or fibres}
- B29B 7/92 Wood chips or wood fibres
- B29B 7/94 . . . Liquid charges
- B29B 7/945 {involving coating particles}

B29B 9/00**Making granules (in general B01J; chemical aspects C08J 3/12)**

- B29B 9/02 . . by dividing preformed material
- B29B 9/04 . . . in the form of plates or sheets
- B29B 9/06 . . . in the form of filamentary material, e.g. combined with extrusion
- B29B 9/065 {under-water, e.g. underwater pelletizers}
- B29B 9/08 . . by agglomerating smaller particles
- B29B 9/10 . . by moulding the material, i.e. treating it in the molten state
- B29B 9/12 . . characterised by structure or composition
- B29B 2009/125 . . . {Micropellets, microgranules, microparticles}
- B29B 9/14 . . fibre-reinforced
- B29B 9/16 . . Auxiliary treatment of granules
- B29B 2009/161 . . . {Absorbing, i.e. introducing a gas, a liquid or a solid material into the granules}
- B29B 2009/163 . . . {Coating, i.e. applying a layer of liquid or solid material on the granule}
- B29B 2009/165 . . . {Crystallizing granules}
- B29B 2009/166 . . . {Deforming granules to give a special form, e.g. spheroidizing, rounding}
- B29B 2009/168 . . . {Removing undesirable residual components, e.g. solvents, unreacted monomers; Degassing}

B29B 11/00	Making preforms (B29C 61/06 takes precedence; {combined with blow-moulding B29C 49/02 , with thermoforming B29C 51/02 ; making preforms for manufacturing of light guides B29D 11/00721 })
B29B 11/02	<ul style="list-style-type: none"> by dividing preformed material, e.g. sheets, rods
B29B 11/04	<ul style="list-style-type: none"> by assembling preformed material
B29B 11/06	<ul style="list-style-type: none"> by moulding the material
B29B 11/08	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Injection moulding
B29B 11/10	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Extrusion moulding
B29B 11/12	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Compression moulding
B29B 11/14	<ul style="list-style-type: none"> characterised by structure or composition
B29B 11/16	<ul style="list-style-type: none"> <ul style="list-style-type: none"> comprising fillers or reinforcement {(non-woven fabrics per se D04H 1/00, D04H 3/00)}
B29B 13/00	Conditioning or physical treatment of the material to be shaped (chemical aspects C08J 3/00 {heating, cooling or curing during shaping B29C 35/00 ; Thermal after-treatment B29C 71/02 })
B29B 2013/002	<ul style="list-style-type: none"> {Extracting undesirable residual components, e.g. solvents, unreacted monomers, from material to be moulded}
B29B 2013/005	<ul style="list-style-type: none"> {Degassing undesirable residual components, e.g. gases, unreacted monomers, from material to be moulded}
B29B 13/007	<ul style="list-style-type: none"> {Treatment of sinter powders}
B29B 13/02	<ul style="list-style-type: none"> by heating (B29B 13/06, B29B 13/08 take precedence)
B29B 13/021	<ul style="list-style-type: none"> <ul style="list-style-type: none"> {Heat treatment of powders}
B29B 13/022	<ul style="list-style-type: none"> <ul style="list-style-type: none"> {Melting the material to be shaped}
B29B 13/023	<ul style="list-style-type: none"> <ul style="list-style-type: none"> {Half-products, e.g. films, plates}
B29B 13/024	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> {Hollow bodies, e.g. tubes or profiles}
B29B 13/025	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> {Tube ends}
B29B 2013/026	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> {Obtaining a uniform temperature over the whole surface of films or tubes}
B29B 2013/027	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> {Obtaining a temperature gradient over the surface of films or tubes}
B29B 2013/028	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> {Obtaining a temperature gradient across the wall thickness of plates or tubes}
B29B 13/04	<ul style="list-style-type: none"> by cooling {(cooling moulded articles or half products B29C 35/16)}
B29B 13/045	<ul style="list-style-type: none"> <ul style="list-style-type: none"> {of powders or pellets}
B29B 13/06	<ul style="list-style-type: none"> by drying (B29B 13/08 takes precedence; {drying moulded articles or half products B29C 37/0092})
B29B 13/065	<ul style="list-style-type: none"> <ul style="list-style-type: none"> {of powder or pellets}
B29B 13/08	<ul style="list-style-type: none"> by using wave energy or particle radiation
B29B 13/10	<ul style="list-style-type: none"> by grinding, e.g. by triturating; by sieving; by filtering
B29B 15/00	Pretreatment of the material to be shaped, not covered by groups B29B 7/00 to B29B 13/00
B29B 15/02	<ul style="list-style-type: none"> of crude rubber, gutta-percha, or similar substances (tapping latex A01G; Chemical aspects C08C)

- B29B 15/023 . . {Breaking up rubber bales}
- B29B 15/026 . . {Baling of rubber}
- B29B 15/04 . . Coagulating devices
- B29B 15/06 . . Washing devices
- B29B 15/08 . of reinforcements or fillers (chemical aspects [C08J](#), [C08K](#))
- B29B 15/10 . . Coating or impregnating {independently of the moulding or shaping step}
(applying liquids in general [B05](#))

NOTE

Where the coating or impregnating is combined with moulding the documents are classified in [B29C 53/8066](#), [B29C 70/00](#)

- B29B 15/105 . . . {of reinforcement of definite length with a matrix in solid form e.g. powder, fibre or sheet form (calendering [B29C 70/506](#))}
- B29B 15/12 . . . of reinforcements of indefinite length
- B29B 15/122 {with a matrix in liquid form, e.g. as melt, solution or latex}
- B29B 15/125 {by dipping}
- B29B 15/127 {by spraying}
- B29B 15/14 of filaments or wires

B29B 17/00

Recovery of plastics or other constituents of waste material containing plastics; ({volume reduction of waste plastics, e.g. by mechanical compacting or melting disposal of solid waste [B09B](#);} chemical recovery [C08J 11/00](#))

- B29B 17/0005 . {Direct recuperation and re-use of scrap material during moulding operation, i.e. feed-back of used material}
- B29B 2017/001 . {Pretreating the materials before recovery}
- B29B 2017/0015 . . {Washing, rinsing}
- B29B 2017/0021 . . {Dividing in large parts}
- B29B 17/0026 . {by agglomeration or compacting}
- B29B 2017/0031 . . {Melting the outer surface of compressed waste, e.g. for forming briquets by expelling the compressed waste material through a heated tool}
- B29B 17/0036 . . {of large particles, e.g. beads, granules, pellets, flakes, slices}
- B29B 17/0042 . . {for shaping parts, e.g. multilayered parts with at least one layer containing regenerated plastic}
- B29B 17/0047 . . {Compacting complete waste articles}
- B29B 17/0052 . . . {Hollow articles, e.g. bottles}
- B29B 2017/0057 {Externally powered deformation tools, e.g. tools being part of relatively big non domestic installations, powered by motors}
- B29B 2017/0063 {Manually driven deformation tools, e.g. tools being part of domestic installations}
- B29B 2017/0068 {Softening the hollow articles by heat and causing permanent deformation}
- B29B 2017/0073 {Removing caps or labels during deformation}
- B29B 2017/0078 {Maintaining the deflated state, e.g. by mounting original screw lids after deformation}

B29B 2017/0084	. . . . {Deflating the hollow articles by vacuum; Details of the nozzles used in the vacuum generating devices.}
B29B 2017/0089	. {Recycling systems, wherein the flow of products between producers, sellers and consumers includes at least a recycling step, e.g. the products being fed back to the sellers or to the producers for recycling purposes}
B29B 2017/0094	. {Mobile recycling devices, e.g. devices installed in truck trailers}
B29B 17/02	. Separating plastics from other materials
B29B 2017/0203	. . {Separating plastics from plastics}
B29B 17/0206	. . {Selectively separating reinforcements from matrix material by destroying the interface bound before desintegrating the matrix to particles or powder, e.g. from tires or belts}
B29B 17/021	. . . {using local heating of the reinforcement}
B29B 2017/0213	. . {Specific separating techniques}
B29B 2017/0217	. . . {Mechanical separating techniques; devices therefor}
B29B 2017/022	. . . . {Grippers, hooks, piercing needles, fingers, e.g. mounted on robots}
B29B 2017/0224	. . . . {Screens, sieves}
B29B 2017/0227	. . . . {Vibratory or shaking tables}
B29B 2017/0231	. . . . {Centrifugating, cyclones}
B29B 2017/0234	. . . . {using gravity, e.g. separating by weight differences in a wind sifter}
B29B 2017/0237	. . . . {using density difference}
B29B 2017/0241	. . . . . {in gas, e.g. air flow}
B29B 2017/0244	. . . . . {in liquids}
B29B 2017/0248	. . . . {Froth flotation, i.e. wherein gas bubbles are attached to suspended particles in an aerated liquid}
B29B 2017/0251	. . . . {Hydropulping for converting the material under the influence of water into a slurry, e.g. for separating laminated plastic from paper}
B29B 2017/0255	. . . {using different melting or softening temperatures of the materials to be separated}
B29B 2017/0258	. . . . {using heated surfaces for selective softening or melting of at least one plastic ingredient}
B29B 2017/0262	. . . {using electrical characteristics}
B29B 2017/0265	. . . . {Electrostatic separation}
B29B 2017/0268	. . . {Separation of metals}
B29B 2017/0272	. . . . {Magnetic separation}
B29B 2017/0275	. . . {using chemical sensors, e.g. analysing gasified constituents}
B29B 2017/0279	. . . {Optical identification, e.g. cameras or spectroscopy}
B29B 2017/0282	. . . {using information associated with the materials, e.g. labels on products}
B29B 2017/0286	. . . {Cleaning means used for separation}
B29B 2017/0289	. . . . {Washing the materials in liquids}
B29B 2017/0293	. . . {Dissolving the materials in gases or liquids}
B29B 2017/0296	. . . . {Dissolving the materials in aqueous alkaline solutions, e.g. NaOH or KOH}

- B29B 17/04 . Disintegrating plastics, {e.g. by milling} ([B29B 9/02](#), [B29B 11/02](#), [B29B 13/10](#), [B29B 17/02](#) take precedence)
- B29B 17/0404 . . {to powder}
- B29B 17/0408 . . . {using cryogenic systems}
- B29B 17/0412 . . {to large particles, e.g. beads, granules, flakes, slices}
- B29B 2017/0416 . . {Cooling the plastics before disintegration, e.g. freezing}
- B29B 2017/042 . . {Mixing disintegrated particles or powders with other materials, e.g. with virgin materials}
- B29B 2017/0424 . . {Specific disintegrating techniques; devices therefor}
- B29B 2017/0428 . . . {Jets of high pressure fluid}
- B29B 2017/0432 {Abrasive blasting, i.e. the jets being charged with abrasives}
- B29B 2017/0436 . . . {Immersion baths}
- B29B 2017/044 . . . {Knives}
- B29B 2017/0444 . . . {Cutting wires, e.g. vibrating wires}
- B29B 2017/0448 . . . {Cutting discs}
- B29B 2017/0452 {the discs containing abrasives}
- B29B 2017/0456 . . . {Pressing tools with calibrated openings, e.g. in sizing plates, for disintegrating solid materials}
- B29B 2017/046 . . . {Extruder as pressing tool with calibrated die openings for forming and disintegrating pasty or melted material}
- B29B 2017/0464 . . . {Solid state shear extrusion pulverisation}
- B29B 2017/0468 . . . {Crushing, i.e. disintegrating into small particles}
- B29B 2017/0472 . . . {Balls or rollers in a container}
- B29B 2017/0476 . . . {Cutting or tearing members, e.g. spiked or toothed cylinders or intermeshing rollers}
- B29B 2017/048 . . . {Cutter-compactors, e.g. of the EREMA type}
- B29B 2017/0484 . . . {Grinding tools, roller mills or disc mills}
- B29B 2017/0488 . . . {Hammers or beaters}
- B29B 2017/0492 . . . {Projecting the material on stationary or moving impact surfaces or plates}
- B29B 2017/0496 . . . {Pyrolysing the materials}
- B29B 2911/00** **Indexing scheme related to making preforms for blow-moulding bottles or the like (not used)**
- B29B 2911/14 . Layer configuration, geometry, dimensions or physical properties of preforms for blow-moulding bottles or the like (not used)
- B29B 2911/14006 . . layer configuration (not used)
- B29B 2911/14013 . . . monolayered
- B29B 2911/1402 at neck portion
- B29B 2911/14026 at flange portion
- B29B 2911/14033 at body portion
- B29B 2911/1404 at bottom portion
- B29B 2911/14046 . . . multilayered

B29B 2911/14053	. . . .	at neck portion
B29B 2911/1406	. . . .	partially
B29B 2911/14066	. . . .	at flange portion
B29B 2911/14073	. . . .	partially
B29B 2911/1408	. . . .	at body portion
B29B 2911/14086	. . . .	partially
B29B 2911/14093	. . . .	at bottom portion
B29B 2911/141	. . . .	partially
B29B 2911/14106	. . . .	having at least one layer
B29B 2911/14113	. . . .	having at least two layers
B29B 2911/1412	. . . .	having at least three layers
B29B 2911/14126	. . . .	having more than three layers
B29B 2911/14133	. . . .	having at least one layer being injected
B29B 2911/1414	. . . .	having at least two layers being injected
B29B 2911/14146	. . . .	having at least three layers being injected
B29B 2911/14153	. . . .	having more than three layers being injected
B29B 2911/1416	. . . .	having at least one layer being extruded
B29B 2911/14166	. . . .	having at least two layers being extruded
B29B 2911/14173	. . . .	having at least three layers being extruded
B29B 2911/1418	. . . .	having more than three layers being extruded
B29B 2911/14186	. . . .	having at least one layer being thermoformed
B29B 2911/14193	. . . .	having at least two layers being thermoformed
B29B 2911/142	. . . .	having at least three layers being thermoformed
B29B 2911/14206	. . . .	having more than three layers being thermoformed
B29B 2911/14213	. . . .	having at least one layer being compression moulded
B29B 2911/1422	. . . .	having at least two layers being compression moulded
B29B 2911/14226	. . . .	having at least three layers being compression moulded
B29B 2911/14233	. . . .	having more than three layers being compression moulded
B29B 2911/1424	. . . .	having at least one layer being applied using techniques not covered by B29B 2911/14133 to B29B 2911/14213
B29B 2911/14246	. . . .	having at least two layers being applied using said techniques
B29B 2911/14253	. . . .	having at least three layers being applied using said techniques
B29B 2911/1426	. . . .	having more than three layers being applied using said techniques
B29B 2911/14266	. . . .	Type of said techniques not covered by B29B 2911/14133 to B29B 2911/14213
B29B 2911/14273	. . . .	Spray coating
B29B 2911/1428	. . . .	Dip coating
B29B 2911/14286	. . . .	Powder coating
B29B 2911/14293	. . . .	Casting
B29B 2911/143	. . . .	Interaction between at least two layers

- B29B 2911/14306 by welding
- B29B 2911/14313 by using adhesives
- B29B 2911/1432 . . Geometry (not used)
- B29B 2911/14326 . . . Variable wall thickness

WARNING

Group [B29B 2911/14326](#) is impacted by reclassification into groups [B29B 2911/14328](#) - [B29B 2911/14332](#).

Groups [B29B 2911/14326](#) and [B29B 2911/14328](#) - [B29B 2911/14332](#) should be considered in order to perform a complete search.

- B29B 2911/14328 at neck portion
- B29B 2911/1433 at flange portion
- B29B 2911/14331 at body portion
- B29B 2911/14332 at bottom portion
- B29B 2911/14333 . . . Variable diameter

WARNING

Group [B29B 2911/14333](#) is impacted by reclassification into groups [B29B 2911/14335](#) - [B29B 2911/14338](#).

Groups [B29B 2911/14333](#) and [B29B 2911/14335](#) - [B29B 2911/14338](#) should be considered in order to perform a complete search.

- B29B 2911/14335 at neck portion
- B29B 2911/14336 at flange portion
- B29B 2911/14337 at body portion
- B29B 2911/14338 at bottom portion
- B29B 2911/1434 . . . Ribs or protrusions

WARNING

Group [B29B 2911/1434](#) is impacted by reclassification into groups [B29B 2911/14341](#) - [B29B 2911/14345](#).

Groups [B29B 2911/1434](#) and [B29B 2911/14341](#) - [B29B 2911/14345](#) should be considered in order to perform a complete search.

- B29B 2911/14341 at neck portion
- B29B 2911/14343 at flange portion
- B29B 2911/14344 at body portion
- B29B 2911/14345 at bottom portion

B29B 2911/14346 . . . Internal separating wall

WARNING

Group [B29B 2911/14346](#) is impacted by reclassification into groups [B29B 2911/14348](#) - [B29B 2911/14352](#).

Groups [B29B 2911/14346](#) and [B29B 2911/14348](#) - [B29B 2911/14352](#) should be considered in order to perform a complete search.

B29B 2911/14348 at neck portion

B29B 2911/1435 at flange portion

B29B 2911/14351 at body portion

B29B 2911/14352 at bottom portion

B29B 2911/14353 . . . Special shape

B29B 2911/1436 Special overall shape

B29B 2911/14366 Conical

B29B 2911/14373 Axially asymmetrical

B29B 2911/1438 Elliptic or oval cross-section shape

B29B 2911/14386 Rectangular cross-section shape

B29B 2911/14393 Hexagonal cross-section shape

B29B 2911/144 Shape allows stacking or nesting

B29B 2911/14406 Special shape of specific parts of preform

B29B 2911/14413 Special lip, i.e. very top of preform neck

B29B 2911/1442 Special neck

B29B 2911/14426 Wide-mouth

B29B 2911/14433 Closure retaining means

B29B 2911/1444 Threads

B29B 2911/14446 Interrupted threads

B29B 2911/14453 Inner threads

B29B 2911/1446 No threads

B29B 2911/14466 Tamper-evident band retaining ring

B29B 2911/14473 Special flange

B29B 2911/1448 Special body

B29B 2911/14486 Special bottom

B29B 2911/14493 Special sprue, i.e. injection mark

B29B 2911/145 Special pinch-off portion

B29B 2911/14506 . . . Auxiliary parts or inserts

B29B 2911/14513 Handle

B29B 2911/1452 Closure

B29B 2911/14526 Transport means

B29B 2911/14533 Dispensing spout

B29B 2911/1454 Parts to assist orientation of preform, e.g. in mould

B29B 2911/14546	. . . . .	at neck portion
B29B 2911/14553	. . . . .	at flange portion
B29B 2911/1456	. . . . .	at body portion
B29B 2911/14566	. . . . .	at bottom portion
B29B 2911/14573	. . . . .	Preform, i.e. neck, flange, body and bottom, made of several individual parts
B29B 2911/1458	. . . . .	Finish neck ring
B29B 2911/14586	. . . . .	Mentioned dimensions (not used)
B29B 2911/14593	. . . . .	Wall thickness
B29B 2911/146	. . . . .	of the lip, i.e. the very top of the preform neck
B29B 2911/14606	. . . . .	of the neck
B29B 2911/14613	. . . . .	of the threads
B29B 2911/1462	. . . . .	of the tamper-evident band retaining ring
B29B 2911/14626	. . . . .	of the flange
B29B 2911/14633	. . . . .	of the body
B29B 2911/1464	. . . . .	of the bottom
B29B 2911/14646	. . . . .	of a layer
B29B 2911/14653	. . . . .	Diameter, D
B29B 2911/1466	. . . . .	of the lip, i.e. the very top of the preform neck
B29B 2911/14666	. . . . .	of the neck
B29B 2911/14673	. . . . .	of the threads
B29B 2911/1468	. . . . .	of the tamper-evident band retaining ring
B29B 2911/14686	. . . . .	of the flange
B29B 2911/14693	. . . . .	of the body
B29B 2911/147	. . . . .	of the bottom
B29B 2911/14706	. . . . .	of a layer
B29B 2911/14713	. . . . .	Height, length, L
B29B 2911/1472	. . . . .	of the lip, i.e. the very top of the preform neck
B29B 2911/14726	. . . . .	of the neck
B29B 2911/14733	. . . . .	of the threads
B29B 2911/1474	. . . . .	of the tamper-evident band retaining ring
B29B 2911/14746	. . . . .	of the flange
B29B 2911/14753	. . . . .	of the body
B29B 2911/1476	. . . . .	of the bottom
B29B 2911/14766	. . . . .	of a layer
B29B 2911/14773	. . . . .	Ratio L/D
B29B 2911/1478	. . . . .	Angle
B29B 2911/14786	. . . . .	of the lip, i.e. the very top of the preform neck
B29B 2911/14793	. . . . .	of the neck
B29B 2911/148	. . . . .	of the threads

B29B 2911/14806	. . . .	of the tamper-evident band retaining ring
B29B 2911/14813	. . . .	of the flange
B29B 2911/1482	. . . .	of the body
B29B 2911/14826	. . . .	of the bottom
B29B 2911/14833	. . . .	of a layer
B29B 2911/1484	. . . .	Curvature, e.g. radius
B29B 2911/14846	. . . .	of the lip, i.e. the very top of the preform neck
B29B 2911/14853	. . . .	of the neck
B29B 2911/1486	. . . .	of the threads
B29B 2911/14866	. . . .	of the tamper-evident band retaining ring
B29B 2911/14873	. . . .	of the flange
B29B 2911/1488	. . . .	of the body
B29B 2911/14886	. . . .	of the bottom
B29B 2911/14893	. . . .	of a layer
B29B 2911/149	. . .	Mentioned values not covered by B29B 2911/14586
B29B 2911/14906	. . . .	Crystallinity
B29B 2911/14913	. . . .	at the neck portion
B29B 2911/1492	. . . .	at the flange portion
B29B 2911/14926	. . . .	at the body portion
B29B 2911/14933	. . . .	at the bottom portion
B29B 2911/1494	. . . .	Surface roughness
B29B 2911/14946	. . . .	at the neck portion
B29B 2911/14953	. . . .	at the flange portion
B29B 2911/1496	. . . .	at the body portion
B29B 2911/14966	. . . .	at the bottom portion
B29B 2911/14973	. . . .	Optical properties
B29B 2911/1498	. . . .	Weight
B29B 2911/14986	. . . .	Composition
B29B 2911/14993	. . . .	Recycled material