

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 . by dividing preformed material, e.g. sheets, rods
- B29B 11/04 . by assembling preformed material
- B29B 11/06 . by moulding the material
- B29B 11/08 . . Injection moulding
- B29B 11/10 . . Extrusion moulding
- B29B 11/12 . . Compression moulding
- B29B 11/14 . characterised by structure or composition

- B29B 11/16 . . 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 . {Extracting undesirable residual components, e.g. solvents, unreacted monomers, from material to be moulded}
- B29B 2013/005 . {Degassing undesirable residual components, e.g. gases, unreacted monomers, from material to be moulded}
- B29B 13/007 . {Treatment of sinter powders}
- B29B 13/02 . by heating ([B29B 13/06](#), [B29B 13/08](#) take precedence)
- B29B 13/021 . . {Heat treatment of powders}
- B29B 13/022 . . {Melting the material to be shaped}
- B29B 13/023 . . {Half-products, e.g. films, plates}
- B29B 13/024 . . . {Hollow bodies, e.g. tubes or profiles}
- B29B 13/025 {Tube ends}
- B29B 2013/026 . . . {Obtaining a uniform temperature over the whole surface of films or tubes}
- B29B 2013/027 . . . {Obtaining a temperature gradient over the surface of films or tubes}
- B29B 2013/028 . . . {Obtaining a temperature gradient across the wall thickness of plates or tubes}
- B29B 13/04 . by cooling {(cooling moulded articles or half products [B29C 35/16](#))}
- B29B 13/045 . . {of powders or pellets}
- B29B 13/06 . by drying ([B29B 13/08](#) takes precedence; {drying moulded articles or half products [B29C 37/0092](#))}
- B29B 13/065 . . {of powder or pellets}
- B29B 13/08 . by using wave energy or particle radiation
- B29B 13/10 . 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 . 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 desintegrating 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 (<i>not used</i>)
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