Symbol	Typ	Titel
B	**Sektion**	**SECTION B — PERFORMING OPERATIONS; TRANSPORTING**
B29	**Klasse**	**WORKING OF PLASTICS; WORKING OF SUBSTANCES IN A PLASTIC STATE IN GENERAL (processing doughs A21C; working chocolate A23G; casting of metals B22; working cement, clay B28; chemical aspects, see section C, particularly C08; working glass C03B; candle making C11C 5/02; making soap C11D 13/00; manufacture of artificial filaments, threads, fibres, bristles or ribbons D01D, D01F; manufacture of articles from cellulosic fibrous suspensions or from papier-mâche D21J)**
B29C	**Unterklasse**	**SHAPING OR JOINING OF PLASTICS; SHAPING OF SUBSTANCES IN A PLASTIC STATE, IN GENERAL; AFTER- TREATMENT OF THE SHAPED PRODUCTS, e.g. REPAIRING (working in the manner of metal B23; grinding, polishing B24; cutting B26D, B26F; making preforms B29B 11/00) [4]**
		Component parts, details or accessories; Auxiliary operations [4]
B29C 31/00	**Hauptgruppe**	**Handling, e.g. feeding of the material to be shaped (in general B65G) [4]**
B29C 31/02	1-Punkt Untergruppe	. Dispensing from vessels, e.g. hoppers [4]
B29C 31/04	1-Punkt Untergruppe	. Feeding, e.g. into a mould cavity (to presses in general B30B 15/30) [4]
B29C 31/06	2-Punkt Untergruppe	. . in measured doses (in general G01F) [4]
B29C 31/08	2-Punkt Untergruppe	. . of preforms [4]
B29C 31/10	2-Punkt Untergruppe	. . of several materials [4]
B29C 33/00	**Hauptgruppe**	**Moulds or cores; Details thereof or accessories therefor [4]**
B29C 33/02	1-Punkt Untergruppe	. with incorporated heating or cooling means [4]
B29C 33/04	2-Punkt Untergruppe	. . using liquids, gas or steam [4]
B29C 33/06	2-Punkt Untergruppe	. . using radiation [4]
B29C 33/08	2-Punkt Untergruppe	. . for dielectric heating [4]
B29C 33/10	1-Punkt Untergruppe	. with incorporated venting means [4]
B29C 33/12	1-Punkt Untergruppe	. with incorporated means for positioning inserts, e.g. labels [4]
B29C 33/14	2-Punkt Untergruppe	. . against the mould wall [4]
B29C 33/16	3-Punkt Untergruppe	. . . using magnetic means [4]
B29C 33/18	3-Punkt Untergruppe	. . . using vacuum [4]
B29C 33/20	1-Punkt Untergruppe	. Opening, closing or clamping [4]
B29C 33/22	2-Punkt Untergruppe	. . by rectilinear movement [4]
B29C 33/24	3-Punkt Untergruppe	. . . using hydraulic or pneumatic means [4]
B29C 33/26	2-Punkt Untergruppe	. . by pivotal movement [4]
B29C 33/28	3-Punkt Untergruppe	. . . using hydraulic or pneumatic means [4]
B29C 33/30	1-Punkt Untergruppe	. Mounting, exchanging or centering [4]
B29C 33/32	2-Punkt Untergruppe	. . using magnetic means [4]

Symbol	Typ	Titel
B29C 33/34	1-Punkt Untergruppe	. movable, e.g. to or from the moulding station [4]
B29C 33/36	2-Punkt Untergruppe	. . continuously movable [4]
B29C 33/38	1-Punkt Untergruppe	. characterised by the material or the manufacturing process (B29C 33/44 takes precedence; manufacture of moulds or parts thereof from metal B22, B23) [4]
B29C 33/40	2-Punkt Untergruppe	. . Plastics, e.g. foam, rubber [4]
B29C 33/42	1-Punkt Untergruppe	. characterised by the shape of the moulding surface, e.g. ribs, grooves [4]
B29C 33/44	1-Punkt Untergruppe	. with means for, or specially constructed to facilitate, the removal of articles, e.g. of undercut articles [4]
B29C 33/46	2-Punkt Untergruppe	. . using fluid pressure [4]
B29C 33/48	2-Punkt Untergruppe	. . with means for collapsing or disassembling [4]
B29C 33/50	3-Punkt Untergruppe	. . . elastic [4]
B29C 33/52	2-Punkt Untergruppe	. . soluble or fusible [4]
B29C 33/54	2-Punkt Untergruppe	. . made of powdered or granular material [4]
B29C 33/56	1-Punkt Untergruppe	. Coatings; Releasing, lubricating or separating agents [4]
B29C 33/58	2-Punkt Untergruppe	. . Applying the releasing agents [4]
B29C 33/60	2-Punkt Untergruppe	. . Releasing, lubricating or separating agents [4]
B29C 33/62	3-Punkt Untergruppe	. . . based on polymers or oligomers [4]
B29C 33/64	4-Punkt Untergruppe	. . . . Silicone [4]
B29C 33/66	4-Punkt Untergruppe	. . . . Cellulose; Derivatives thereof [4]
B29C 33/68	2-Punkt Untergruppe	. . Release sheets [4]
B29C 33/70	1-Punkt Untergruppe	. Maintenance [4]
B29C 33/72	2-Punkt Untergruppe	. . Cleaning [4]
B29C 33/74	2-Punkt Untergruppe	. . Repairing [4]
B29C 33/76	1-Punkt Untergruppe	. Cores (B29C 33/02-B29C 33/70 take precedence) [4]
B29C 35/00	**Hauptgruppe**	**Heating, cooling or curing, e.g. crosslinking, vulcanising; Apparatus therefor (moulds with incorporated heating or cooling means B29C 33/02; curing devices for plastics dental prostheses A61C 13/14; before moulding B29B 13/00; chemical aspects C08J 3/00) [4]**
B29C 35/02	1-Punkt Untergruppe	. Heating or curing, e.g. crosslinking, vulcanising (cold vulcanisation B29C 35/18) [4]
B29C 35/04	2-Punkt Untergruppe	. . using liquids, gas or steam [4]
B29C 35/06	3-Punkt Untergruppe	. . . for articles of indefinite length [4]
B29C 35/08	2-Punkt Untergruppe	. . by wave energy or particle radiation [4]
B29C 35/10	3-Punkt Untergruppe	. . . for articles of indefinite length [4]
B29C 35/12	2-Punkt Untergruppe	. . Dielectric heating [4]
B29C 35/14	3-Punkt Untergruppe	. . . for articles of indefinite length [4]
B29C 35/16	1-Punkt Untergruppe	. Cooling [4]

Symbol	Typ	Titel
B29C 35/18	1-Punkt Untergruppe	. Cold vulcanisation [4]
B29C 37/00	**Hauptgruppe**	**Component parts, details, accessories or auxiliary operations, not covered by group B29C 33/00 or B29C 35/00 [4]**
B29C 37/02	1-Punkt Untergruppe	. Deburring or deflashing (by grinding or polishing B24B) [4]
B29C 37/04	2-Punkt Untergruppe	. . of welded articles, e.g. deburring or deflashing in combination with welding [4]
		Particular shaping techniques, e.g. moulding, joining; Apparatus therefor [4]
B29C 39/00	**Hauptgruppe**	**Shaping by casting, i.e. introducing the moulding material into a mould or between confining surfaces without significant moulding pressure; Apparatus therefor (B29C 41/00 takes precedence) [4]**
B29C 39/02	1-Punkt Untergruppe	. for making articles of definite length, i.e. discrete articles [4]
B29C 39/04	2-Punkt Untergruppe	. . using movable moulds (B29C 41/02 takes precedence) [4]
B29C 39/06	3-Punkt Untergruppe	. . . continuously movable, e.g. along a production line [4]
B29C 39/08	3-Punkt Untergruppe	. . . Introducing the material into the mould by centrifugal force [4]
B29C 39/10	2-Punkt Untergruppe	. . incorporating preformed parts or layers, e.g. casting around inserts or for coating articles [4]
B29C 39/12	2-Punkt Untergruppe	. . Making multilayered or multicoloured articles [4]
B29C 39/14	1-Punkt Untergruppe	. for making articles of indefinite length [4]
B29C 39/16	2-Punkt Untergruppe	. . between endless belts [4]
B29C 39/18	2-Punkt Untergruppe	. . incorporating preformed parts or layers, e.g. casting around inserts or for coating articles [4]
B29C 39/20	2-Punkt Untergruppe	. . Making multilayered or multicoloured articles [4]
B29C 39/22	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [4]
B29C 39/24	2-Punkt Untergruppe	. . Feeding the material into the mould [4]
B29C 39/26	2-Punkt Untergruppe	. . Moulds or cores [4]
B29C 39/28	3-Punkt Untergruppe	. . . with means to avoid flashes [4]
B29C 39/30	3-Punkt Untergruppe	. . . with means for cutting the article [4]
B29C 39/32	3-Punkt Untergruppe	. . . with joints or the like for making the mould impervious [4]
B29C 39/34	3-Punkt Untergruppe	. . . for undercut articles [4]
B29C 39/36	2-Punkt Untergruppe	. . Removing moulded articles [4]
B29C 39/38	2-Punkt Untergruppe	. . Heating or cooling [4]
B29C 39/40	2-Punkt Untergruppe	. . Compensating volume change, e.g. retraction [4]
B29C 39/42	2-Punkt Untergruppe	. . Casting under special conditions, e.g. vacuum [4]
B29C 39/44	2-Punkt Untergruppe	. . Measuring, controlling or regulating [4]
B29C 41/00	**Hauptgruppe**	**Shaping by coating a mould, core or other substrate, i.e. by depositing material and stripping-off the shaped article; Apparatus therefor (with compacting pressure B29C 43/00) [4]**
B29C 41/02	1-Punkt Untergruppe	. for making articles of definite length, i.e. discrete articles [4]
B29C 41/04	2-Punkt Untergruppe	. . Rotational or centrifugal casting, i.e. coating the inside of a mould by rotating the mould [4]

Symbol	Typ	Titel
B29C 41/06	3-Punkt Untergruppe	. . . about two or more axes [4]
B29C 41/08	2-Punkt Untergruppe	. . Coating a former, core or other substrate by spraying or fluidisation, e.g. spraying powder [4]
B29C 41/10	3-Punkt Untergruppe	. . . by fluidisation [4]
B29C 41/12	2-Punkt Untergruppe	. . Spreading-out the material on a substrate [4]
B29C 41/14	2-Punkt Untergruppe	. . Dipping a core [4]
B29C 41/16	2-Punkt Untergruppe	. . Slip casting, i.e. applying a slip or slurry on a perforated or porous or absorbent surface with the liquid being drained away [4]
B29C 41/18	2-Punkt Untergruppe	. . Slush casting, i.e. pouring moulding material into a hollow mould with excess material being poured off [4]
B29C 41/20	2-Punkt Untergruppe	. . incorporating preformed parts or layers, e.g. moulding around inserts or for coating articles [4]
B29C 41/22	2-Punkt Untergruppe	. . Making multilayered or multicoloured articles [4]
B29C 41/24	1-Punkt Untergruppe	. for making articles of indefinite length [4]
B29C 41/26	2-Punkt Untergruppe	. . by depositing flowable material on a rotating drum [4]
B29C 41/28	2-Punkt Untergruppe	. . by depositing flowable material on an endless belt [4]
B29C 41/30	2-Punkt Untergruppe	. . incorporating preformed parts or layers, e.g. moulding around inserts or for coating articles [4]
B29C 41/32	2-Punkt Untergruppe	. . Making multilayered or multicoloured articles [4]
B29C 41/34	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [4]
B29C 41/36	2-Punkt Untergruppe	. . Feeding the material on to the mould, core or other substrate [4]
B29C 41/38	2-Punkt Untergruppe	. . Moulds, cores or other substrates [4]
B29C 41/40	3-Punkt Untergruppe	. . . Cores [4]
B29C 41/42	2-Punkt Untergruppe	. . Removing articles from moulds, cores or other substrates [4]
B29C 41/44	3-Punkt Untergruppe	. . . Articles of indefinite length [4]
B29C 41/46	2-Punkt Untergruppe	. . Heating or cooling [4]
B29C 41/48	2-Punkt Untergruppe	. . Compensating volume change, e.g. retraction [4]
B29C 41/50	2-Punkt Untergruppe	. . Shaping under special conditions, e.g. vacuum [4]
B29C 41/52	2-Punkt Untergruppe	. . Measuring, controlling or regulating [4]
B29C 43/00	**Hauptgruppe**	**Compression moulding, i.e. applying external pressure to flow the moulding material; Apparatus therefor (shaping or impregnating by compression composites comprising reinforcements other than fibres of short length B29C 70/40; presses in general B30B) [4, 6]**
B29C 43/02	1-Punkt Untergruppe	. of articles of definite length, i.e. discrete articles [4]
B29C 43/04	2-Punkt Untergruppe	. . using movable moulds [4]
B29C 43/06	3-Punkt Untergruppe	. . . continuously movable [4]
B29C 43/08	4-Punkt Untergruppe	. . . . with circular movement [4]
B29C 43/10	2-Punkt Untergruppe	. . Isostatic pressing, i.e. using non-rigid pressure-exerting members against rigid parts or dies [4]
B29C 43/12	3-Punkt Untergruppe	. . . using bags surrounding the moulding material [4]

Symbol	Typ	Titel
B29C 43/14	2-Punkt Untergruppe	. . in several steps [4]
B29C 43/16	2-Punkt Untergruppe	. . Forging [4]
B29C 43/18	2-Punkt Untergruppe	. . incorporating preformed parts or layers, e.g. compression moulding around inserts or for coating articles [4]
B29C 43/20	2-Punkt Untergruppe	. . Making multilayered or multicoloured articles [4]
B29C 43/22	1-Punkt Untergruppe	. of articles of indefinite length [4]
B29C 43/24	2-Punkt Untergruppe	. . Calendering [4]
B29C 43/26	2-Punkt Untergruppe	. . in several steps (B29C 43/30 takes precedence) [4]
B29C 43/28	2-Punkt Untergruppe	. . incorporating preformed parts or layers, e.g. compression moulding around inserts or for coating articles [4]
B29C 43/30	2-Punkt Untergruppe	. . Making multilayered or multicoloured articles [4]
B29C 43/32	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [4]
B29C 43/34	2-Punkt Untergruppe	. . Feeding the material to the mould or the compression means [4]
B29C 43/36	2-Punkt Untergruppe	. . Moulds for making articles of definite length, i.e. discrete articles [4]
B29C 43/38	3-Punkt Untergruppe	. . . with means to avoid flashes [4]
B29C 43/40	3-Punkt Untergruppe	. . . with means for cutting the article [4]
B29C 43/42	3-Punkt Untergruppe	. . . for undercut articles [4]
B29C 43/44	2-Punkt Untergruppe	. . Compression means for making articles of indefinite length [4]
B29C 43/46	3-Punkt Untergruppe	. . . Rollers [4]
B29C 43/48	3-Punkt Untergruppe	. . . Endless belts [4]
B29C 43/50	2-Punkt Untergruppe	. . Removing moulded articles [4]
B29C 43/52	2-Punkt Untergruppe	. . Heating or cooling [4]
B29C 43/54	2-Punkt Untergruppe	. . Compensating volume change, e.g. retraction [4]
B29C 43/56	2-Punkt Untergruppe	. . Compression moulding under special conditions, e.g. vacuum [4]
B29C 43/58	2-Punkt Untergruppe	. . Measuring, controlling or regulating [4]
B29C 44/00	**Hauptgruppe**	**Shaping by internal pressure generated in the material, e.g. swelling, foaming [6]**
B29C 44/02	1-Punkt Untergruppe	. for articles of definite length, i.e. discrete articles [6]
B29C 44/04	2-Punkt Untergruppe	. . consisting of at least two parts of chemically or physically different materials, e.g. having different densities [6]
B29C 44/06	3-Punkt Untergruppe	. . . Making multilayered articles [6]
B29C 44/08	2-Punkt Untergruppe	. . using several expanding steps [6]
B29C 44/10	2-Punkt Untergruppe	. . Applying counter-pressure during expanding [6]
B29C 44/12	2-Punkt Untergruppe	. . Incorporating or moulding on preformed parts, e.g. inserts, reinforcements [6]
B29C 44/14	3-Punkt Untergruppe	. . . the preformed part being a lining [6]

Symbol	Typ	Titel
B29C 44/16	4-Punkt Untergruppe	. . . . shaped by the expansion of the material [6]
B29C 44/18	3-Punkt Untergruppe	. . . Filling preformed cavities [6]
B29C 44/20	1-Punkt Untergruppe	. for articles of indefinite length [6]
B29C 44/22	2-Punkt Untergruppe	. . consisting of at least two parts of chemically or physically different materials, e.g. having different densities [6]
B29C 44/24	3-Punkt Untergruppe	. . . Making multilayered articles [6]
B29C 44/26	2-Punkt Untergruppe	. . using several expanding steps [6]
B29C 44/28	2-Punkt Untergruppe	. . Expanding the moulding material on continuous moving surfaces [6]
B29C 44/30	2-Punkt Untergruppe	. . Expanding the moulding material between endless belts or rollers [6]
B29C 44/32	2-Punkt Untergruppe	. . Incorporating or moulding on preformed parts, e.g. linings, inserts, reinforcements [6]
B29C 44/34	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [6]
B29C 44/36	2-Punkt Untergruppe	. . Feeding the material to be shaped [6]
B29C 44/38	3-Punkt Untergruppe	. . . into a closed space, i.e. to make articles of definite length [6]
B29C 44/40	4-Punkt Untergruppe	. . . . by gravity, e.g. by casting [6]
B29C 44/42	4-Punkt Untergruppe	. . . . using pressure difference, e.g. by injection, by vacuum [6]
B29C 44/44	4-Punkt Untergruppe	. . . . in the form of expandable particles or beads [6]
B29C 44/46	3-Punkt Untergruppe	. . . into an open space or onto moving surfaces, i.e. to make articles of indefinite length [6]
B29C 44/48	4-Punkt Untergruppe	. . . . by gravity, e.g. casting onto, or between, moving surfaces [6]
B29C 44/50	4-Punkt Untergruppe	. . . . using pressure difference, e.g. by extrusion, by spraying [6]
B29C 44/52	5-Punkt Untergruppe	. . . . . between moving surfaces [6]
B29C 44/54	4-Punkt Untergruppe	. . . . in the form of expandable particles or beads [6]
B29C 44/56	2-Punkt Untergruppe	. . After-treatment of articles, e.g. for altering the shape [6]
B29C 44/58	2-Punkt Untergruppe	. . Moulds [6]
B29C 44/60	2-Punkt Untergruppe	. . Measuring, controlling or regulating [6]
B29C 45/00	**Hauptgruppe**	**Injection moulding, i.e. forcing the required volume of moulding material through a nozzle into a closed mould; Apparatus therefor (injection blow-moulding B29C 49/06) [4]**
B29C 45/02	1-Punkt Untergruppe	. Transfer moulding, i.e. transferring the required volume of moulding material by a plunger from a "shot" cavity into a mould cavity [4]
B29C 45/03	1-Punkt Untergruppe	. Injection moulding apparatus (transfer moulding B29C 45/02) [4]
B29C 45/04	2-Punkt Untergruppe	. . using movable moulds (B29C 45/08 takes precedence) [4]
B29C 45/06	3-Punkt Untergruppe	. . . on a turntable [4]
B29C 45/07	2-Punkt Untergruppe	. . using movable injection units [4]
B29C 45/08	3-Punkt Untergruppe	. . . moving with the mould during the injection operation [4]
B29C 45/10	2-Punkt Untergruppe	. . using moulds or injection units usable in different arrangements or combinations to each other [4]

Symbol	Typ	Titel
B29C 45/12	2-Punkt Untergruppe	. . using two or more fixed moulds, e.g. in tandem [4]
B29C 45/13	2-Punkt Untergruppe	. . using two or more injection units co-operating with a single mould [4]
B29C 45/14	1-Punkt Untergruppe	. incorporating preformed parts or layers, e.g. injection moulding around inserts or for coating articles [4]
B29C 45/16	1-Punkt Untergruppe	. Making multilayered or multicoloured articles [4]
B29C 45/17	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [4]
B29C 45/18	2-Punkt Untergruppe	. . Feeding the material into the injection moulding apparatus [4]
B29C 45/20	2-Punkt Untergruppe	. . Injection nozzles [4]
B29C 45/22	3-Punkt Untergruppe	. . . Multiple nozzle systems [4]
B29C 45/23	3-Punkt Untergruppe	. . . Feed stopping equipment [4]
B29C 45/24	3-Punkt Untergruppe	. . . Cleaning equipment [4]
B29C 45/26	2-Punkt Untergruppe	. . Moulds [4]
B29C 45/27	3-Punkt Untergruppe	. . . Sprue channels [4]
B29C 45/28	4-Punkt Untergruppe	. . . . Closure devices therefor [4]
B29C 45/30	4-Punkt Untergruppe	. . . . Flow control means disposed within the sprue channel, e.g. "torpedo" construction [4]
B29C 45/32	3-Punkt Untergruppe	. . . having several axially spaced mould cavities [4]
B29C 45/33	3-Punkt Untergruppe	. . . having transversely, e.g. radially, movable mould parts [4]
B29C 45/34	3-Punkt Untergruppe	. . . having venting means [4]
B29C 45/36	3-Punkt Untergruppe	. . . having means for locating or centering cores [4]
B29C 45/37	3-Punkt Untergruppe	. . . Mould cavity walls [4]
B29C 45/38	2-Punkt Untergruppe	. . Cutting-off equipment for sprues or ingates [4]
B29C 45/40	2-Punkt Untergruppe	. . Removing or ejecting moulded articles [4]
B29C 45/42	3-Punkt Untergruppe	. . . using means movable from outside the mould between mould parts [4]
B29C 45/43	3-Punkt Untergruppe	. . . using fluid under pressure [4]
B29C 45/44	3-Punkt Untergruppe	. . . for undercut articles [4]
B29C 45/46	2-Punkt Untergruppe	. . Means for plasticising or homogenising the moulding material or forcing it into the mould [4]
B29C 45/47	3-Punkt Untergruppe	. . . using screws (B29C 45/54 takes precedence) [4]
B29C 45/48	4-Punkt Untergruppe	. . . . Plasticising screw and injection screw [4]
B29C 45/50	4-Punkt Untergruppe	. . . . Axially movable screw [4]
B29C 45/52	5-Punkt Untergruppe	. . . . . Non-return devices [4]
B29C 45/53	3-Punkt Untergruppe	. . . using injection ram or piston [4]
B29C 45/54	4-Punkt Untergruppe	. . . . and plasticising screw [4]
B29C 45/56	3-Punkt Untergruppe	. . . using mould parts movable during or after injection, e.g. injection-compression moulding [4]

Symbol	Typ	Titel
B29C 45/57	3-Punkt Untergruppe	. . . Exerting after-pressure on the moulding material [4]
B29C 45/58	3-Punkt Untergruppe	. . . Details [4]
B29C 45/60	4-Punkt Untergruppe	. . . . Screws [4]
B29C 45/62	4-Punkt Untergruppe	. . . . Barrels or cylinders [4]
B29C 45/63	4-Punkt Untergruppe	. . . . Venting or degassing means [4]
B29C 45/64	2-Punkt Untergruppe	. . Mould opening, closing or clamping devices [4]
B29C 45/66	3-Punkt Untergruppe	. . . mechanical [4]
B29C 45/67	3-Punkt Untergruppe	. . . hydraulic [4]
B29C 45/68	3-Punkt Untergruppe	. . . hydro-mechanical [4]
B29C 45/70	2-Punkt Untergruppe	. . Means for plasticising or homogenising the moulding material or forcing it into the mould, combined with mould opening, closing or clamping devices [4]
B29C 45/72	2-Punkt Untergruppe	. . Heating or cooling [4]
B29C 45/73	3-Punkt Untergruppe	. . . of the mould [4]
B29C 45/74	3-Punkt Untergruppe	. . . of the injection unit [4]
B29C 45/76	2-Punkt Untergruppe	. . Measuring, controlling or regulating [4]
B29C 45/77	3-Punkt Untergruppe	. . . of velocity or pressure of moulding material [4]
B29C 45/78	3-Punkt Untergruppe	. . . of temperature [4]
B29C 45/80	3-Punkt Untergruppe	. . . of relative position of mould parts [4]
B29C 45/82	3-Punkt Untergruppe	. . . Hydraulic circuits [4]
B29C 45/83	2-Punkt Untergruppe	. . Lubricating means [4]
B29C 45/84	2-Punkt Untergruppe	. . Safety devices [4]
B29C 47/00	**Hauptgruppe**	**Extrusion moulding, i.e. expressing the moulding material through a die or nozzle which imparts the desired form; Apparatus therefor (extrusion blow-moulding B29C 49/04; extrusion presses in general B30B 11/22) [4]**
B29C 47/02	1-Punkt Untergruppe	. incorporating preformed parts or layers, e.g. extrusion moulding around inserts or for coating articles [4]
B29C 47/04	1-Punkt Untergruppe	. of multilayered or multicoloured articles [4]
B29C 47/06	2-Punkt Untergruppe	. . Multilayered articles [4]
B29C 47/08	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [4]
B29C 47/10	2-Punkt Untergruppe	. . Feeding the material to the extruder [4]
B29C 47/12	2-Punkt Untergruppe	. . Extrusion nozzles or dies [4]
B29C 47/14	3-Punkt Untergruppe	. . . with broad opening, e.g. for sheets [4]
B29C 47/16	4-Punkt Untergruppe	. . . . adjustable [4]
B29C 47/18	4-Punkt Untergruppe	. . . . with die parts oscillating relative to each other [4]
B29C 47/20	3-Punkt Untergruppe	. . . with annular opening, e.g. for tubular articles [4]

Symbol	Typ	Titel
B29C 47/22	4-Punkt Untergruppe	. . . . adjustable [4]
B29C 47/24	4-Punkt Untergruppe	. . . . with die parts rotatable relative to each other [4]
B29C 47/26	4-Punkt Untergruppe	. . . . Multiple annular extrusion nozzles [4]
B29C 47/28	4-Punkt Untergruppe	. . . . Cross-head annular extrusion nozzles [4]
B29C 47/30	3-Punkt Untergruppe	. . . Multi-port extrusion nozzles [4]
B29C 47/32	3-Punkt Untergruppe	. . . Roller-extrusion nozzles [4]
B29C 47/34	2-Punkt Untergruppe	. . Conveyers for extruded material [4]
B29C 47/36	2-Punkt Untergruppe	. . Means for plasticising or homogenising the moulding material or forcing it through the nozzle or die [4]
B29C 47/38	3-Punkt Untergruppe	. . . using screws [4]
B29C 47/40	4-Punkt Untergruppe	. . . . using at least two intermeshing screws [4]
B29C 47/42	5-Punkt Untergruppe	. . . . . using sub-screws, e.g. planetary screws [4]
B29C 47/44	4-Punkt Untergruppe	. . . . using axially movable screws [4]
B29C 47/46	4-Punkt Untergruppe	. . . . using screws extruding in opposite directions [4]
B29C 47/48	4-Punkt Untergruppe	. . . . using screws arranged coaxially, one within the other [4]
B29C 47/50	4-Punkt Untergruppe	. . . . using at least two screws, one after the other, e.g. multi-stage plasticisers [4]
B29C 47/52	3-Punkt Untergruppe	. . . using rollers or discs [4]
B29C 47/54	3-Punkt Untergruppe	. . . using press rams or pistons [4]
B29C 47/56	3-Punkt Untergruppe	. . . using more than one extruder to feed one die [4]
B29C 47/58	3-Punkt Untergruppe	. . . Details [4]
B29C 47/60	4-Punkt Untergruppe	. . . . Screws [4]
B29C 47/62	5-Punkt Untergruppe	. . . . . having more than one screw-thread [4]
B29C 47/64	5-Punkt Untergruppe	. . . . . having incorporated mixing devices [4]
B29C 47/66	4-Punkt Untergruppe	. . . . Barrels or cylinders [4]
B29C 47/68	4-Punkt Untergruppe	. . . . Filters [4]
B29C 47/70	4-Punkt Untergruppe	. . . . Flow dividers [4]
B29C 47/72	4-Punkt Untergruppe	. . . . Feedback means [4]
B29C 47/74	4-Punkt Untergruppe	. . . . By-pass means [4]
B29C 47/76	4-Punkt Untergruppe	. . . . Venting or degassing means [4]
B29C 47/78	2-Punkt Untergruppe	. . Heating or cooling the material to be extruded or the stream of extruded material [4]
B29C 47/80	3-Punkt Untergruppe	. . . at plasticising zone [4]
B29C 47/82	4-Punkt Untergruppe	. . . . Heating the cylinders [4]
B29C 47/84	4-Punkt Untergruppe	. . . . Heating the screws [4]

Symbol	Typ	Titel
B29C 47/86	3-Punkt Untergruppe	. . . at nozzle zone [4]
B29C 47/88	3-Punkt Untergruppe	. . . Heating or cooling the stream of extruded material [4]
B29C 47/90	4-Punkt Untergruppe	. . . . with calibration or sizing [4]
B29C 47/92	2-Punkt Untergruppe	. . Measuring, controlling or regulating [4]
B29C 47/94	2-Punkt Untergruppe	. . Lubricating [4]
B29C 47/96	2-Punkt Untergruppe	. . Safety devices [4]
B29C 49/00	**Hauptgruppe**	**Blow-moulding, i.e. blowing a preform or parison to a desired shape within a mould; Apparatus therefor [4]**
B29C 49/02	1-Punkt Untergruppe	. Combined blow-moulding and manufacture of the preform or the parison [4]
B29C 49/04	2-Punkt Untergruppe	. . Extrusion blow-moulding [4]
B29C 49/06	2-Punkt Untergruppe	. . Injection blow-moulding [4]
B29C 49/08	1-Punkt Untergruppe	. Biaxial stretching during blow-moulding [4]
B29C 49/10	2-Punkt Untergruppe	. . using mechanical means [4]
B29C 49/12	3-Punkt Untergruppe	. . . Stretching rods [4]
B29C 49/14	3-Punkt Untergruppe	. . . Clamps [4]
B29C 49/16	2-Punkt Untergruppe	. . using pressure difference, e.g. pre-blowing [4]
B29C 49/18	1-Punkt Untergruppe	. using several blowing steps (B29C 49/16 takes precedence) [4]
B29C 49/20	1-Punkt Untergruppe	. of articles having inserts or reinforcements [4]
B29C 49/22	1-Punkt Untergruppe	. using multilayered preforms or parisons [4]
B29C 49/24	1-Punkt Untergruppe	. Lining or labelling [4]
B29C 49/26	2-Punkt Untergruppe	. . inner lining of tubes [4]
B29C 49/28	1-Punkt Untergruppe	. Blow-moulding apparatus [4]
B29C 49/30	2-Punkt Untergruppe	. . having movable moulds or mould parts [4]
B29C 49/32	3-Punkt Untergruppe	. . . moving "to and fro" [4]
B29C 49/34	4-Punkt Untergruppe	. . . . the mould parts moving "hand-over-hand" [4]
B29C 49/36	3-Punkt Untergruppe	. . . rotatable about one axis [4]
B29C 49/38	3-Punkt Untergruppe	. . . mounted on movable endless supports [4]
B29C 49/40	4-Punkt Untergruppe	. . . . on co-operating drums [4]
B29C 49/42	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [4]
B29C 49/44	2-Punkt Untergruppe	. . for applying pressure through the walls of an inflated bag [4]
B29C 49/46	2-Punkt Untergruppe	. . characterised by using particular environment or blow fluids other than air [4]
B29C 49/48	2-Punkt Untergruppe	. . Moulds [4]
B29C 49/50	3-Punkt Untergruppe	. . . having cutting or deflashing means [4]

Symbol	Typ	Titel
B29C 49/52	3-Punkt Untergruppe	. . . having decorating or printing means [4]
B29C 49/54	3-Punkt Untergruppe	. . . for undercut articles [4]
B29C 49/56	2-Punkt Untergruppe	. . Opening, closing or clamping means [4]
B29C 49/58	2-Punkt Untergruppe	. . Blowing means [4]
B29C 49/60	3-Punkt Untergruppe	. . . Blow-needles [4]
B29C 49/62	2-Punkt Untergruppe	. . Venting means [4]
B29C 49/64	2-Punkt Untergruppe	. . Heating or cooling preforms, parisons or blown articles [4]
B29C 49/66	3-Punkt Untergruppe	. . . Cooling by refrigerant introduced into the blown article [4]
B29C 49/68	3-Punkt Untergruppe	. . . Ovens specially adapted for heating preforms or parisons [4]
B29C 49/70	2-Punkt Untergruppe	. . Removing or ejecting blown articles from the mould [4]
B29C 49/72	2-Punkt Untergruppe	. . Deflashing outside the mould [4]
B29C 49/74	3-Punkt Untergruppe	. . . Deflashing the neck portion [4]
B29C 49/76	2-Punkt Untergruppe	. . Neck calibration [4]
B29C 49/78	2-Punkt Untergruppe	. . Measuring, controlling or regulating [4]
B29C 49/80	3-Punkt Untergruppe	. . . Testing, e.g. for leaks [4]
B29C 51/00	**Hauptgruppe**	**Shaping by thermoforming, e.g. shaping sheets in matched moulds or by deep-drawing; Apparatus therefor [4]**
B29C 51/02	1-Punkt Untergruppe	. Combined thermoforming and manufacture of the preform [4]
B29C 51/04	1-Punkt Untergruppe	. Combined thermoforming and prestretching, e.g. biaxial stretching [4]
B29C 51/06	2-Punkt Untergruppe	. . using pressure difference [4]
B29C 51/08	1-Punkt Untergruppe	. Deep-drawing or matched-mould forming, i.e. using mechanical means only [4]
B29C 51/10	1-Punkt Untergruppe	. Forming by pressure difference, e.g. vacuum [4]
B29C 51/12	1-Punkt Untergruppe	. of articles having inserts or reinforcements [4]
B29C 51/14	1-Punkt Untergruppe	. using multilayered preforms or sheets [4]
B29C 51/16	1-Punkt Untergruppe	. Lining or labelling [4]
B29C 51/18	1-Punkt Untergruppe	. Thermoforming apparatus [4]
B29C 51/20	2-Punkt Untergruppe	. . having movable moulds or mould parts [4]
B29C 51/22	3-Punkt Untergruppe	. . . rotatable about an axis [4]
B29C 51/24	3-Punkt Untergruppe	. . . mounted on movable endless supports [4]
B29C 51/26	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [4]
B29C 51/28	2-Punkt Untergruppe	. . for applying pressure through the wall of an inflated bag or diaphragm [4]
B29C 51/30	2-Punkt Untergruppe	. . Moulds [4]
B29C 51/32	3-Punkt Untergruppe	. . . having cutting means [4]

Symbol	Typ	Titel
B29C 51/34	3-Punkt Untergruppe	. . . for undercut articles [4]
B29C 51/36	3-Punkt Untergruppe	. . . specially adapted for vacuum forming [4]
B29C 51/38	3-Punkt Untergruppe	. . . Opening, closing or clamping means [4]
B29C 51/40	3-Punkt Untergruppe	. . . Venting means [4]
B29C 51/42	2-Punkt Untergruppe	. . Heating or cooling [4]
B29C 51/44	2-Punkt Untergruppe	. . Removing or ejecting moulded articles [4]
B29C 51/46	2-Punkt Untergruppe	. . Measuring, controlling or regulating [4]
B29C 53/00	**Hauptgruppe**	**Shaping by bending, folding, twisting, straightening or flattening; Apparatus therefor (B29C 61/10 takes precedence) [4]**
B29C 53/02	1-Punkt Untergruppe	. Bending or folding (B29C 53/22, B29C 53/34, B29C 53/36, B29C 53/56 take precedence) [4]
B29C 53/04	2-Punkt Untergruppe	. . of plates or sheets [4]
B29C 53/06	3-Punkt Untergruppe	. . . Forming folding lines by pressing or scoring [4]
B29C 53/08	2-Punkt Untergruppe	. . of tubes [4]
B29C 53/10	2-Punkt Untergruppe	. . of blown tubular films, e.g. gusseting [4]
B29C 53/12	2-Punkt Untergruppe	. . helically, e.g. for making springs [4]
B29C 53/14	1-Punkt Untergruppe	. Twisting [4]
B29C 53/16	1-Punkt Untergruppe	. Straightening or flattening [4]
B29C 53/18	2-Punkt Untergruppe	. . of plates or sheets [4]
B29C 53/20	2-Punkt Untergruppe	. . of tubes [4]
B29C 53/22	1-Punkt Untergruppe	. Corrugating [4]
B29C 53/24	2-Punkt Untergruppe	. . of plates or sheets [4]
B29C 53/26	3-Punkt Untergruppe	. . . parallel with direction of feed [4]
B29C 53/28	3-Punkt Untergruppe	. . . transverse to direction of feed [4]
B29C 53/30	2-Punkt Untergruppe	. . of tubes (by blow-moulding B29C 49/00) [4]
B29C 53/32	1-Punkt Untergruppe	. Coiling (B29C 53/56 takes precedence) [4]
B29C 53/34	1-Punkt Untergruppe	. Rim rolling (of tube ends B29C 57/12) [4]
B29C 53/36	1-Punkt Untergruppe	. Bending and joining, e.g. for making hollow articles (B29C 53/56 takes precedence; from paper B31C) [4]
B29C 53/38	2-Punkt Untergruppe	. . by bending sheets or strips at right angles to the longitudinal axis of the article being formed and joining the edges [4]
B29C 53/40	3-Punkt Untergruppe	. . . for articles of definite length, i.e. discrete articles [4]
B29C 53/42	4-Punkt Untergruppe	. . . . using internal forming surfaces, e.g. mandrels [4]
B29C 53/44	5-Punkt Untergruppe	. . . . . rotatable about the axis of the article [4]
B29C 53/46	4-Punkt Untergruppe	. . . . using external forming surfaces, e.g. sleeves [4]

Symbol	Typ	Titel
B29C 53/48	3-Punkt Untergruppe	. . . for articles of indefinite length, i.e. bending a strip progressively [4]
B29C 53/50	4-Punkt Untergruppe	. . . . using internal forming surfaces, e.g. mandrels [4]
B29C 53/52	4-Punkt Untergruppe	. . . . using external forming surfaces, e.g. sleeves [4]
B29C 53/54	4-Punkt Untergruppe	. . . . Guiding, aligning or shaping edges [4]
B29C 53/56	1-Punkt Untergruppe	. Winding and joining, e.g. winding spirally [4]
B29C 53/58	2-Punkt Untergruppe	. . helically [4]
B29C 53/60	3-Punkt Untergruppe	. . . using internal forming surfaces, e.g. mandrels [4]
B29C 53/62	4-Punkt Untergruppe	. . . . rotatable about the winding axis [4]
B29C 53/64	5-Punkt Untergruppe	. . . . . and moving axially [4]
B29C 53/66	5-Punkt Untergruppe	. . . . . with axially movable winding feed member [4]
B29C 53/68	4-Punkt Untergruppe	. . . . with rotatable winding feed member [4]
B29C 53/70	5-Punkt Untergruppe	. . . . . and moving axially [4]
B29C 53/72	3-Punkt Untergruppe	. . . using external forming surfaces [4]
B29C 53/74	3-Punkt Untergruppe	. . . using a forming surface in the shape of an endless belt which is recycled after the forming operation [4]
B29C 53/76	3-Punkt Untergruppe	. . . about more than one axis [4]
B29C 53/78	3-Punkt Untergruppe	. . . using profiled sheets or strips [4]
B29C 53/80	1-Punkt Untergruppe	. Component parts, details or accessories; Auxiliary operations [4]
B29C 53/82	2-Punkt Untergruppe	. . Cores or mandrels [4]
B29C 53/84	2-Punkt Untergruppe	. . Heating or cooling [4]
B29C 55/00	**Hauptgruppe**	**Shaping by stretching, e.g. drawing through a die; Apparatus therefor (B29C 61/08 takes precedence) [4]**
B29C 55/02	1-Punkt Untergruppe	. of plates or sheets [4]
B29C 55/04	2-Punkt Untergruppe	. . uniaxial, e.g. oblique [4]
B29C 55/06	3-Punkt Untergruppe	. . . parallel with the direction of feed [4]
B29C 55/08	3-Punkt Untergruppe	. . . transverse to the direction of feed [4]
B29C 55/10	2-Punkt Untergruppe	. . multiaxial [4]
B29C 55/12	3-Punkt Untergruppe	. . . biaxial [4]
B29C 55/14	4-Punkt Untergruppe	. . . . successively [4]
B29C 55/16	4-Punkt Untergruppe	. . . . simultaneously [4]
B29C 55/18	2-Punkt Untergruppe	. . by squeezing between surfaces, e.g. rollers [4]
B29C 55/20	2-Punkt Untergruppe	. . Edge clamps [4]
B29C 55/22	1-Punkt Untergruppe	. of tubes [4]
B29C 55/24	2-Punkt Untergruppe	. . radial [4]

Symbol	Typ	Titel
B29C 55/26	2-Punkt Untergruppe	. . biaxial [4]
B29C 55/28	1-Punkt Untergruppe	. of blown tubular films, e.g. by inflation [4]
B29C 55/30	1-Punkt Untergruppe	. Drawing through a die [4]
B29C 57/00	**Hauptgruppe**	**Shaping of tube ends, e.g. flanging, belling, closing; Apparatus therefor [4]**
B29C 57/02	1-Punkt Untergruppe	. Belling or enlarging, e.g. combined with forming a groove [4]
B29C 57/04	2-Punkt Untergruppe	. . using mechanical means [4]
B29C 57/06	3-Punkt Untergruppe	. . . elastically deformable [4]
B29C 57/08	2-Punkt Untergruppe	. . using pressure difference [4]
B29C 57/10	1-Punkt Untergruppe	. Closing [4]
B29C 57/12	1-Punkt Untergruppe	. Rim rolling [4]
B29C 59/00	**Hauptgruppe**	**Surface shaping, e.g. embossing; Apparatus therefor [4]**
B29C 59/02	1-Punkt Untergruppe	. by mechanical means, e.g. pressing [4]
B29C 59/04	2-Punkt Untergruppe	. . using rollers or endless belts [4]
B29C 59/06	2-Punkt Untergruppe	. . using vacuum drums [4]
B29C 59/08	1-Punkt Untergruppe	. by flame treatment [4]
B29C 59/10	1-Punkt Untergruppe	. by electric discharge treatment (electrodes H01T) [4]
B29C 59/12	2-Punkt Untergruppe	. . in an environment other than air [4]
B29C 59/14	1-Punkt Untergruppe	. by plasma treatment (in general H05H) [4]
B29C 59/16	1-Punkt Untergruppe	. by wave energy or particle radiation [4]
B29C 59/18	1-Punkt Untergruppe	. by liberation of internal stresses, e.g. plastic memory [4]
B29C 61/00	**Hauptgruppe**	**Shaping by liberation of internal stresses; Making preforms having internal stresses; Apparatus therefor (for surface shaping B29C 59/18; for lining articles B29C 63/38; for joining preformed parts B29C 65/66) [4]**
B29C 61/02	1-Punkt Untergruppe	. Thermal shrinking [4]
B29C 61/04	1-Punkt Untergruppe	. Thermal expansion [4]
B29C 61/06	1-Punkt Untergruppe	. Making preforms having internal stresses, e.g. plastic memory [4]
B29C 61/08	2-Punkt Untergruppe	. . by stretching tubes [4]
B29C 61/10	2-Punkt Untergruppe	. . by bending plates or sheets [4]
B29C 63/00	**Hauptgruppe**	**Lining or sheathing, i.e. applying preformed layers or sheathings of plastics; Apparatus therefor (B29C 73/00 takes precedence; by blowing B29C 49/00; by thermoforming B29C 51/00) [4, 5]**
B29C 63/02	1-Punkt Untergruppe	. using sheet or web-like material (B29C 63/26 takes precedence) [4]
B29C 63/04	2-Punkt Untergruppe	. . by folding, winding, bending or the like [4]
B29C 63/06	3-Punkt Untergruppe	. . . around tubular articles [4]
B29C 63/08	3-Punkt Untergruppe	. . . by winding helically [4]
B29C 63/10	4-Punkt Untergruppe	. . . . around tubular articles [4]

Symbol	Typ	Titel
B29C 63/12	3-Punkt Untergruppe	. . . by winding spirally [4]
B29C 63/14	4-Punkt Untergruppe	. . . . around tubular articles [4]
B29C 63/16	2-Punkt Untergruppe	. . applied by "rubber" bag or diaphragm [4]
B29C 63/18	1-Punkt Untergruppe	. using tubular layers or sheathings (B29C 63/26 takes precedence) [4]
B29C 63/20	2-Punkt Untergruppe	. . using pressure difference, e.g. vacuum [4]
B29C 63/22	1-Punkt Untergruppe	. using layers or sheathings having a shape adapted to the shape of the article (B29C 63/26 takes precedence) [4]
B29C 63/24	1-Punkt Untergruppe	. using threads [4]
B29C 63/26	1-Punkt Untergruppe	. Lining or sheathing of internal surfaces (B29C 63/38 takes precedence) [4]
B29C 63/28	2-Punkt Untergruppe	. . applied by "rubber" bag or diaphragm [4]
B29C 63/30	2-Punkt Untergruppe	. . using sheet or web-like material [4]
B29C 63/32	3-Punkt Untergruppe	. . . by winding helically [4]
B29C 63/34	2-Punkt Untergruppe	. . using tubular layer or sheathings [4]
B29C 63/36	3-Punkt Untergruppe	. . . being turned inside out [4]
B29C 63/38	1-Punkt Untergruppe	. by liberation of internal stresses [4]
B29C 63/40	2-Punkt Untergruppe	. . using sheet or web-like material [4]
B29C 63/42	2-Punkt Untergruppe	. . using tubular layers or sheathings [4]
B29C 63/44	2-Punkt Untergruppe	. . the shape of the layers or sheathings being adapted to the shape of the articles [4]
B29C 63/46	2-Punkt Untergruppe	. . of internal surfaces [4]
B29C 63/48	1-Punkt Untergruppe	. Preparation of the surfaces [4]
B29C 65/00	**Hauptgruppe**	**Joining of preformed parts; Apparatus therefor (for making boxes, cartons, envelopes or bags B31B; for sealing or securing package folds or closures B65B 51/00; joining constructional elements, in general F16B; splicing of light guides G02B 6/255) [4, 5]**
B29C 65/02	1-Punkt Untergruppe	. by heating, with or without pressure [4]
B29C 65/04	2-Punkt Untergruppe	. . Dielectric heating, e.g. high-frequency welding [4]
B29C 65/06	2-Punkt Untergruppe	. . using friction, e.g. spin welding [4]
B29C 65/08	2-Punkt Untergruppe	. . using ultrasonic vibrations [4]
B29C 65/10	2-Punkt Untergruppe	. . using hot gases [4]
B29C 65/12	3-Punkt Untergruppe	. . . and welding bar [4]
B29C 65/14	2-Punkt Untergruppe	. . using wave energy or particle radiation [4]
B29C 65/16	3-Punkt Untergruppe	. . . Laser beam [4]
B29C 65/18	2-Punkt Untergruppe	. . using heated tool [4]
B29C 65/20	3-Punkt Untergruppe	. . . with direct contact, e.g. using "mirror" [4]
B29C 65/22	3-Punkt Untergruppe	. . . Heated wire [4]

Symbol	Typ	Titel
B29C 65/24	3-Punkt Untergruppe	. . . characterised by the means for heating the tool [4]
B29C 65/26	4-Punkt Untergruppe	. . . . Hot fluid [4]
B29C 65/28	4-Punkt Untergruppe	. . . . Flame or combustible material [4]
B29C 65/30	4-Punkt Untergruppe	. . . . Electrical means [4]
B29C 65/32	5-Punkt Untergruppe	. . . . . Induction [4]
B29C 65/34	2-Punkt Untergruppe	. . using heated elements which remain in the joint, e.g. "verlorenes Schweisselement" [4]
B29C 65/36	3-Punkt Untergruppe	. . . heated by induction [4]
B29C 65/38	2-Punkt Untergruppe	. . Impulse heating [4]
B29C 65/40	2-Punkt Untergruppe	. . Applying molten plastics, e.g. hot melt (using welding bar B29C 65/12; by moulding B29C 65/70) [4]
B29C 65/42	3-Punkt Untergruppe	. . . between pre-assembled parts [4]
B29C 65/44	2-Punkt Untergruppe	. . Joining a heated non-plastics element to a plastics element [4]
B29C 65/46	3-Punkt Untergruppe	. . . heated by induction [4]
B29C 65/48	1-Punkt Untergruppe	. using adhesives (heat-activated B29C 65/02; hot melts B29C 65/40; non-mechanical parts of adhesive processes, in general C09J 5/00) [4]
B29C 65/50	2-Punkt Untergruppe	. . using adhesive tape [4]
B29C 65/52	2-Punkt Untergruppe	. . Applying the adhesive [4]
B29C 65/54	3-Punkt Untergruppe	. . . between pre-assembled parts [4]
B29C 65/56	1-Punkt Untergruppe	. using mechanical means [4]
B29C 65/58	2-Punkt Untergruppe	. . Snap connection [4]
B29C 65/60	2-Punkt Untergruppe	. . Riveting [4]
B29C 65/62	2-Punkt Untergruppe	. . Stitching [4]
B29C 65/64	2-Punkt Untergruppe	. . Joining a non-plastics element to a plastics element, e.g. by force (B29C 65/44 takes precedence) [4]
B29C 65/66	1-Punkt Untergruppe	. by liberation of internal stresses, e.g. shrinking of one of the parts to be joined [4]
B29C 65/68	2-Punkt Untergruppe	. . using auxiliary shrinkable element [4]
B29C 65/70	1-Punkt Untergruppe	. by moulding (using a particular moulding technique, see the relevant place for that technique) [4]
B29C 65/72	1-Punkt Untergruppe	. by combined operations, e.g. welding and stitching [4]
B29C 65/74	1-Punkt Untergruppe	. by welding and severing [4]
B29C 65/76	1-Punkt Untergruppe	. Making non-permanent or releasable joints [4]
B29C 65/78	1-Punkt Untergruppe	. Means for handling the parts to be joined, e.g. for making containers or hollow articles [4]
B29C 65/80	2-Punkt Untergruppe	. . Rotatable transfer means [4]
B29C 65/82	1-Punkt Untergruppe	. Testing the joint [4]
B29C 67/00	**Hauptgruppe**	**Shaping techniques not covered by groups B29C 39/00-B29C 65/00, B29C 70/00 or B29C 73/00 [4, 6]**

Symbol	Typ	Titel
B29C 67/02	1-Punkt Untergruppe	. Moulding by agglomerating [4]
B29C 67/04	2-Punkt Untergruppe	. . Sintering (combined with compression B29C 43/00) [4]
B29C 67/06	2-Punkt Untergruppe	. . Coagulating [4]
B29C 67/08	1-Punkt Untergruppe	. Screen moulding, e.g. forcing the moulding material through a perforated screen on to a moulding surface [4]
B29C 67/20	1-Punkt Untergruppe	. for porous or cellular articles, e.g. of foam plastics, coarse-pored [4]
B29C 67/24	1-Punkt Untergruppe	. characterised by the choice of material [4]
B29C 69/00	**Hauptgruppe**	**Combinations of shaping techniques not provided for in a single one of main groups B29C 39/00-B29C 67/00, e.g. associations of moulding and joining techniques; Apparatus therefor [4]**
B29C 69/02	1-Punkt Untergruppe	. of moulding techniques only [4]
B29C 70/00	**Hauptgruppe**	**Shaping composites, i.e. plastics material comprising reinforcements, fillers or preformed parts, e.g. inserts (chemical aspects C08, e.g. C08J 5/00) [6]**
B29C 70/02	1-Punkt Untergruppe	. comprising combinations of reinforcements and fillers incorporated in matrix material, forming one or more layers, with or without non-reinforced or non-filled layers [6]
B29C 70/04	1-Punkt Untergruppe	. comprising reinforcements only, e.g. self-reinforcing plastics [6]
B29C 70/06	2-Punkt Untergruppe	. . Fibrous reinforcements only [6]
B29C 70/08	3-Punkt Untergruppe	. . . comprising combinations of different forms of fibrous reinforcements incorporated in matrix material, forming one or more layers, with or without non-reinforced layers [6]
B29C 70/10	3-Punkt Untergruppe	. . . characterised by the structure of fibrous reinforcements [6]
B29C 70/12	4-Punkt Untergruppe	. . . . using fibres of short length, e.g. in the form of a mat [6]
B29C 70/14	5-Punkt Untergruppe	. . . . . oriented (oriented filler material B29C 70/62) [6]
B29C 70/16	4-Punkt Untergruppe	. . . . using fibres of substantial or continuous length [6]
B29C 70/18	5-Punkt Untergruppe	. . . . . in the form of a mat, e.g. sheet moulding compound (SMC) [6]
B29C 70/20	5-Punkt Untergruppe	. . . . . oriented in a single direction, e.g. roving or other parallel fibres [6]
B29C 70/22	5-Punkt Untergruppe	. . . . . oriented in at least two directions forming a two dimensional structure [6]
B29C 70/24	5-Punkt Untergruppe	. . . . . oriented in at least three directions forming a three dimensional structure [6]
B29C 70/26	2-Punkt Untergruppe	. . Non-fibrous reinforcements only [6]
B29C 70/28	2-Punkt Untergruppe	. . Shaping operations therefor [6]
B29C 70/30	3-Punkt Untergruppe	. . . Shaping by lay-up, i.e. applying fibres, tape or broadsheet on a mould, former or core; Shaping by spray-up, i.e. spraying of fibres on a mould, former or core [6]
B29C 70/32	4-Punkt Untergruppe	. . . . on a rotating mould, former or core [6]
B29C 70/34	4-Punkt Untergruppe	. . . . and shaping or impregnating by compression [6]
B29C 70/36	4-Punkt Untergruppe	. . . . and impregnating by casting, e.g. vacuum casting [6]
B29C 70/38	4-Punkt Untergruppe	. . . . Automated lay-up, e.g. using robots, laying filaments according to predetermined patterns [6]
B29C 70/40	3-Punkt Untergruppe	. . . Shaping or impregnating by compression (B29C 70/34 takes precedence) [6]
B29C 70/42	4-Punkt Untergruppe	. . . . for producing articles of definite length, i.e. discrete articles [6]

Symbol	Typ	Titel
B29C 70/44	5-Punkt Untergruppe	. . . . . using isostatic pressure, e.g. pressure difference-, vacuum bag-, autoclave- or expanding rubber-moulding [6]
B29C 70/46	5-Punkt Untergruppe	. . . . . using matched moulds, e.g. for deforming sheet moulding compounds (SMC), prepregs [6]
B29C 70/48	6-Punkt Untergruppe	. . . . . and impregnating the reinforcements in the closed mould, e.g. resin transfer moulding (RTM) [6]
B29C 70/50	4-Punkt Untergruppe	. . . . for producing articles of indefinite length, e.g. prepregs, sheet moulding compounds (SMC), cross moulding compounds (XMC) [6]
B29C 70/52	5-Punkt Untergruppe	. . . . . Pultrusion, i.e. forming and compressing by continuously pulling through a die [6]
B29C 70/54	3-Punkt Untergruppe	. . . Component parts, details or accessories; Auxiliary operations [6]
B29C 70/56	4-Punkt Untergruppe	. . . . Tensioning reinforcements before or during shaping [6]
B29C 70/58	1-Punkt Untergruppe	. comprising fillers only [6]
B29C 70/60	2-Punkt Untergruppe	. . comprising a combination of distinct filler types incorporated in matrix material, forming one or more layers, and with or without non-filled layers [6]
B29C 70/62	2-Punkt Untergruppe	. . the filler being oriented during moulding (for fibres of short length B29C 70/14) [6]
B29C 70/64	2-Punkt Untergruppe	. . the filler influencing the surface characteristics of the material, e.g. by concentrating near the surface or by incorporation into the surface by force [6]
B29C 70/66	2-Punkt Untergruppe	. . the filler comprising hollow constituents, e.g. syntactic foam [6]
B29C 70/68	1-Punkt Untergruppe	. by incorporating or moulding on preformed parts, e.g. inserts, layers [6]
B29C 70/70	2-Punkt Untergruppe	. . Completely encapsulating inserts [6]
B29C 70/72	2-Punkt Untergruppe	. . Encapsulating inserts having non-encapsulated projections, e.g. extremities, terminal portions of electrical components [6]
B29C 70/74	2-Punkt Untergruppe	. . Moulding material on a relatively small portion of the preformed part, e.g. outsert moulding [6]
B29C 70/76	3-Punkt Untergruppe	. . . Moulding on edges or extremities of the preformed part [6]
B29C 70/78	2-Punkt Untergruppe	. . Moulding material on one side only of the preformed part [6]
B29C 70/80	3-Punkt Untergruppe	. . . Moulding sealing material into closure members [6]
B29C 70/82	2-Punkt Untergruppe	. . Forcing wires, nets or the like partially or completely into the surface of an article, e.g. by cutting and pressing (pressing beads or the like into a surface B29C 70/64) [6]
B29C 70/84	2-Punkt Untergruppe	. . Moulding material on preformed parts to be joined [6]
B29C 70/86	2-Punkt Untergruppe	. . Incorporating in coherent impregnated reinforcing layers [6]
B29C 70/88	1-Punkt Untergruppe	. characterised primarily by possessing specific properties, e.g. electrically conductive, locally reinforced [6]
B29C 71/00	**Hauptgruppe**	**After-treatment of articles without altering their shape; Apparatus therefor (B29C 44/56, B29C 73/00 take precedence; surface shaping B29C 59/00; chemical aspects C08J 7/00) [4, 5, 6]**
B29C 71/02	1-Punkt Untergruppe	. Thermal after-treatment [4]
B29C 71/04	1-Punkt Untergruppe	. by wave energy or particle radiation [4]
B29C 73/00	**Hauptgruppe**	**Repairing of articles made from plastics or substances in a plastic state, e.g. of articles shaped or produced by using techniques covered by this subclass or subclass B29D (retreading tyres B29D 30/54; devices for covering leaks in pipes or hoses F16L 55/16) [5]**
B29C 73/02	1-Punkt Untergruppe	. using liquid or paste-like material (B29C 73/16 takes precedence) [5]

Symbol	Typ	Titel
B29C 73/04	1-Punkt Untergruppe	. using preformed elements [5]
B29C 73/06	2-Punkt Untergruppe	. . using plugs sealing in the hole [5]
B29C 73/08	3-Punkt Untergruppe	. . . Apparatus therefor, e.g. for inserting [5]
B29C 73/10	2-Punkt Untergruppe	. . using patches sealing on the surface of the article (B29C 73/14 takes precedence) [5]
B29C 73/12	3-Punkt Untergruppe	. . . Apparatus therefor, e.g. for applying (B29C 73/30 takes precedence) [5]
B29C 73/14	2-Punkt Untergruppe	. . using elements composed of two parts joined together after having been placed one on each side of the article [5]
B29C 73/16	1-Punkt Untergruppe	. Auto-repairing or self-sealing arrangements or agents (sealing compositions, see Section C, e.g. C09K 3/10) [5]
B29C 73/18	2-Punkt Untergruppe	. . the article material itself being self-sealing, e.g. by compression [5]
B29C 73/20	3-Punkt Untergruppe	. . . the article material only consisting in part of a deformable sealing material [5]
B29C 73/22	2-Punkt Untergruppe	. . the article containing elements including a sealing composition, e.g. powder being liberated when the article is damaged [5]
B29C 73/24	1-Punkt Untergruppe	. Apparatus or accessories not otherwise provided for [5]
B29C 73/26	2-Punkt Untergruppe	. . for mechanical pretreatment [5]
B29C 73/28	2-Punkt Untergruppe	. . for clamping and stretching flexible material, e.g. inner tubes [5]
B29C 73/30	2-Punkt Untergruppe	. . for local pressing or local heating [5]
B29C 73/32	3-Punkt Untergruppe	. . . using an elastic element, e.g. inflatable bag [5]
B29C 73/34	3-Punkt Untergruppe	. . . for local heating [5]