

Symbol	Typ	Titel
B	Sektion	SECTION B — PERFORMING OPERATIONS; TRANSPORTING
B01	Untersektion	SEPARATING; MIXING
B01	Klasse	PHYSICAL OR CHEMICAL PROCESSES OR APPARATUS IN GENERAL (furnaces, kilns, ovens, retorts, in general F27)
B01F	Unterklasse	MIXING, e.g. DISSOLVING, EMULSIFYING, DISPERSING (mixing paints B44D 3/06)
B01F 1/00	Hauptgruppe	Dissolving (separating by dissolving B01D; dissolving to effect cooling F25D 5/00) [2]
B01F 3/00	Hauptgruppe	Mixing, e.g. dispersing, emulsifying, according to the phases to be mixed
B01F 3/02	1-Punkt Untergruppe	. gases with gases or vapours
B01F 3/04	1-Punkt Untergruppe	. gases or vapours with liquids (mixing non-alcoholic beverages with gases A23L 2/54)
B01F 3/06	1-Punkt Untergruppe	. gases or vapours with solids
B01F 3/08	1-Punkt Untergruppe	. liquids with liquids; Emulsifying
B01F 3/10	2-Punkt Untergruppe	. . Mixing very viscous liquids
B01F 3/12	1-Punkt Untergruppe	. liquids with solids (displacing one liquid by another in dispersions of solids in liquids B01D 12/00)
B01F 3/14	2-Punkt Untergruppe	. . Mixing very viscous liquids with solids
B01F 3/18	1-Punkt Untergruppe	. solid with solids
B01F 3/20	1-Punkt Untergruppe	. Pretreatment of the materials to be mixed
B01F 3/22	1-Punkt Untergruppe	. Aftertreatment of the mixture
		<u>Mixers</u>
B01F 5/00	Hauptgruppe	Flow mixers (sprayers, atomisers B05B); Mixers for falling materials, e.g. solid particles (B01F 13/04 takes precedence; centrifugal mixers B04)
B01F 5/02	1-Punkt Untergruppe	. Jet mixers
B01F 5/04	1-Punkt Untergruppe	. Injector mixers
B01F 5/06	1-Punkt Untergruppe	. Mixers in which the components are pressed together through slits, orifices, or screens (turbo-mixers B01F 5/16; colloid-mills B02C; mixing valves F16K 11/00)
B01F 5/08	2-Punkt Untergruppe	. . Homogenising or emulsifying nozzles
B01F 5/10	1-Punkt Untergruppe	. Circulation mixers
B01F 5/12	1-Punkt Untergruppe	. Pump mixers
B01F 5/14	2-Punkt Untergruppe	. . of the gear type
B01F 5/16	2-Punkt Untergruppe	. . Turbo-mixers
B01F 5/18	1-Punkt Untergruppe	. Spray-mixers
B01F 5/20	2-Punkt Untergruppe	. . with nozzles
B01F 5/22	2-Punkt Untergruppe	. . with rotary discs
B01F 5/24	1-Punkt Untergruppe	. Falling particle mixers with repeated action
B01F 5/26	1-Punkt Untergruppe	. Falling particle mixers with moving means, e.g. stirrers for increasing the mixing
B01F 7/00	Hauptgruppe	Mixers with rotary stirring devices in fixed receptacles; Kneaders (B01F 13/04 takes precedence)

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B01F 7/02	1-Punkt Untergruppe	. with stirrers rotating about a horizontal or inclined axis
B01F 7/04	2-Punkt Untergruppe	. . with paddles or arms
B01F 7/06	2-Punkt Untergruppe	. . with propellers
B01F 7/08	2-Punkt Untergruppe	. . with helices
B01F 7/10	2-Punkt Untergruppe	. . with rotary discs
B01F 7/12	2-Punkt Untergruppe	. . with cylinders
B01F 7/14	2-Punkt Untergruppe	. . with stirrers having planetary motion
B01F 7/16	1-Punkt Untergruppe	. with stirrers rotating about a vertical axis
B01F 7/18	2-Punkt Untergruppe	. . with paddles or arms
B01F 7/20	3-Punkt Untergruppe	. . . with fixed axis
B01F 7/22	2-Punkt Untergruppe	. . with propellers
B01F 7/24	2-Punkt Untergruppe	. . with helices
B01F 7/26	2-Punkt Untergruppe	. . with rotary discs
B01F 7/28	2-Punkt Untergruppe	. . with cylinders
B01F 7/30	2-Punkt Untergruppe	. . with stirrers having planetary motion
B01F 7/32	2-Punkt Untergruppe	. . with openwork frames or cages
B01F 9/00	Hauptgruppe	Mixers with rotating receptacles (B01F 13/04 takes precedence)
B01F 9/02	1-Punkt Untergruppe	. rotating about a horizontal or inclined axis, e.g. drum mixers
B01F 9/04	2-Punkt Untergruppe	. . without bars
B01F 9/06	2-Punkt Untergruppe	. . with fixed bars
B01F 9/08	2-Punkt Untergruppe	. . with rotating stirring devices
B01F 9/10	1-Punkt Untergruppe	. rotating about a vertical axis
B01F 9/12	2-Punkt Untergruppe	. . with paddles or arms
B01F 9/14	2-Punkt Untergruppe	. . with propellers
B01F 9/16	2-Punkt Untergruppe	. . with helices
B01F 9/18	2-Punkt Untergruppe	. . with rotary discs
B01F 9/20	2-Punkt Untergruppe	. . with cylinders
B01F 9/22	1-Punkt Untergruppe	. with stirrers having planetary motion
B01F 11/00	Hauptgruppe	Mixers with shaking, oscillating, or vibrating mechanisms (B01F 13/04 takes precedence)
B01F 11/02	1-Punkt Untergruppe	. Mixing by means of ultrasonic vibrations
B01F 11/04	1-Punkt Untergruppe	. with pendulum stirrers
B01F 13/00	Hauptgruppe	Other mixers; Mixing plant, including combinations of dissimilar mixers
B01F 13/02	1-Punkt Untergruppe	. Mixers with gas agitation, e.g. with air supply tubes

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B01F 13/04	1-Punkt Untergruppe	. Mixers combined with safety devices
B01F 13/06	1-Punkt Untergruppe	. Mixers adapted for working at sub- or super-atmospheric pressure
B01F 13/08	1-Punkt Untergruppe	. Magnetic mixers
B01F 13/10	1-Punkt Untergruppe	. Mixing plant, including combinations of dissimilar mixers
B01F 15/00	Hauptgruppe	Accessories for mixers
B01F 15/02	1-Punkt Untergruppe	. Feed or discharge mechanisms
B01F 15/04	1-Punkt Untergruppe	. Forming a predetermined ratio of the substances to be mixed (controlling ratio of two or more flows of fluid or fluent material G05D 11/02)
B01F 15/06	1-Punkt Untergruppe	. Heating or cooling systems
B01F 17/00	Hauptgruppe	Use of substances as emulsifying, wetting, dispersing, or foam-producing agents (flotation agents B03D 1/001; used for particular applications, <u>see</u> the relevant classes, e.g. use of substances as detergents C11D) [3, 5]
B01F 17/02	1-Punkt Untergruppe	. Alkyl sulfonates or sulfuric acid ester salts derived from monohydric alcohols
B01F 17/04	1-Punkt Untergruppe	. Sulfonates or sulfuric acid ester salts derived from polyhydric alcohols or amino alcohols or derivatives thereof (sulfated or sulfonated fatty oils B01F 17/08)
B01F 17/06	1-Punkt Untergruppe	. Esters of higher fatty acids with hydroxyalkylated sulfonic acids or salts thereof
B01F 17/08	1-Punkt Untergruppe	. Sulfation or sulfonation products of fats, oils, waxes, or higher fatty acids or esters thereof with monovalent alcohols
B01F 17/10	1-Punkt Untergruppe	. Derivatives of low-molecular-weight sulfocarboxylic acids or sulfopolycarboxylic acids
B01F 17/12	1-Punkt Untergruppe	. Sulfonates of aromatic or alkylated aromatic compounds
B01F 17/14	1-Punkt Untergruppe	. Derivatives of phosphoric acid
B01F 17/16	1-Punkt Untergruppe	. Amines or polyamines
B01F 17/18	1-Punkt Untergruppe	. Quaternary ammonium compounds
B01F 17/20	1-Punkt Untergruppe	. Phosphonium and sulfonium compounds
B01F 17/22	1-Punkt Untergruppe	. Amides or hydrazides
B01F 17/24	2-Punkt Untergruppe	. . Amides of higher fatty acids with aminoalkylated sulfonic acids
B01F 17/26	1-Punkt Untergruppe	. Sulfonamides
B01F 17/28	1-Punkt Untergruppe	. Aminocarboxylic acids (protein hydrolysates B01F 17/30)
B01F 17/30	1-Punkt Untergruppe	. Proteins; Protein hydrolysates
B01F 17/32	1-Punkt Untergruppe	. Heterocyclic compounds
B01F 17/34	1-Punkt Untergruppe	. Higher-molecular-weight carboxylic acid esters (B01F 17/06 takes precedence)
B01F 17/36	2-Punkt Untergruppe	. . Esters of polycarboxylic acids
B01F 17/38	1-Punkt Untergruppe	. Alcohols, e.g. oxidation products of paraffins
B01F 17/40	1-Punkt Untergruppe	. Phenols
B01F 17/42	1-Punkt Untergruppe	. Ethers, e.g. polyglycol ethers of alcohols or phenols

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B01F 17/44	2-Punkt Untergruppe	. . Ether carboxylic acids
B01F 17/46	2-Punkt Untergruppe	. . Ethers of aminoalcohols
B01F 17/48	2-Punkt Untergruppe	. . Cellulose ethers
B01F 17/50	1-Punkt Untergruppe	. Derivatives of lignin
B01F 17/52	1-Punkt Untergruppe	. Natural or synthetic resins or their salts
B01F 17/54	1-Punkt Untergruppe	. Silicon compounds
B01F 17/56	1-Punkt Untergruppe	. Glucosides; Mucilage; Saponines