

B 01 F MIXING, e.g. DISSOLVING, EMULSIFYING, DISPERSING (mixing paints B 44 D 3/06)

Note

In this subclass, the following term or expression is used with the meaning indicated:

- “mixing” covers stirring of a single material. [2]

Subclass Index

DISSOLVING.....	1/00	with rotary action	7/00, 9/00
MIXING, DISPERSING, EMULSIFYING		other mixers.....	11/00, 13/00
Processes	3/00	accessories.....	15/00
Apparatus		EMULSIFYING OR DISPERSING AGENTS.....	17/00
flow mixers	5/00		

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- 1/00 Dissolving** (separating by dissolving B 01 D; dissolving to effect cooling F 25 D 5/00) [2]
- 3/00 Mixing, e.g. dispersing, emulsifying, according to the phases to be mixed**
- 3/02 . gases with gases or vapours
 - 3/04 . gases or vapours with liquids (mixing non-alcoholic beverages with gases A 23 L 2/54)
 - 3/06 . gases or vapours with solids
 - 3/08 . liquids with liquids; Emulsifying
 - 3/10 . . Mixing very viscous liquids
 - 3/12 . liquids with solids (displacing one liquid by another in dispersions of solids in liquids B 01 D 12/00)
 - 3/14 . . Mixing very viscous liquids with solids
 - 3/18 . solid with solids
 - 3/20 . Pretreatment of the materials to be mixed
 - 3/22 . Aftertreatment of the mixture
- Mixers**
- 5/00 Flow mixers** (sprayers, atomisers B 05 B); **Mixers for falling materials, e.g. solid particles** (13/04 takes precedence; centrifugal mixers B 04)
- 5/02 . Jet mixers
 - 5/04 . Injector mixers
 - 5/06 . Mixers in which the components are pressed together through slits, orifices, or screens (turbo-mixers 5/16; colloid-mills B 02 C; mixing valves F 16 K 11/00)
 - 5/08 . . Homogenising or emulsifying nozzles
 - 5/10 . Circulation mixers
 - 5/12 . Pump mixers
 - 5/14 . . of the gear type
 - 5/16 . . Turbo-mixers
 - 5/18 . Spray-mixers
 - 5/20 . . with nozzles
 - 5/22 . . with rotary discs
 - 5/24 . Falling particle mixers with repeated action
 - 5/26 . Falling particle mixers with moving means, e.g. stirrers for increasing the mixing
- 7/00 Mixers with rotary stirring devices in fixed receptacles; Kneaders** (13/04 takes precedence)
- 7/02 . with stirrers rotating about a horizontal or inclined axis
 - 7/04 . . with paddles or arms
 - 7/06 . . with propellers
 - 7/08 . . with helices
- 7/10 . . with rotary discs
 - 7/12 . . with cylinders
 - 7/14 . . with stirrers having planetary motion
 - 7/16 . with stirrers rotating about a vertical axis
 - 7/18 . . with paddles or arms
 - 7/20 . . . with fixed axis
 - 7/22 . . with propellers
 - 7/24 . . with helices
 - 7/26 . . with rotary discs
 - 7/28 . . with cylinders
 - 7/30 . . with stirrers having planetary motion
 - 7/32 . . with openwork frames or cages
- 9/00 Mixers with rotating receptacles** (13/04 takes precedence)
- 9/02 . rotating about a horizontal or inclined axis, e.g. drum mixers
 - 9/04 . . without bars
 - 9/06 . . with fixed bars
 - 9/08 . . with rotating stirring devices
 - 9/10 . rotating about a vertical axis
 - 9/12 . . with paddles or arms
 - 9/14 . . with propellers
 - 9/16 . . with helices
 - 9/18 . . with rotary discs
 - 9/20 . . with cylinders
 - 9/22 . with stirrers having planetary motion
- 11/00 Mixers with shaking, oscillating, or vibrating mechanisms** (13/04 takes precedence)
- 11/02 . Mixing by means of ultrasonic vibrations
 - 11/04 . with pendulum stirrers
- 13/00 Other mixers; Mixing plant, including combinations of dissimilar mixers**
- 13/02 . Mixers with gas agitation, e.g. with air supply tubes
 - 13/04 . Mixers combined with safety devices
 - 13/06 . Mixers adapted for working at sub- or super-atmospheric pressure
 - 13/08 . Magnetic mixers
 - 13/10 . Mixing plant, including combinations of dissimilar mixers
- 15/00 Accessories for mixers**
- 15/02 . Feed or discharge mechanisms

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- 15/04 . Forming a predetermined ratio of the substances to be mixed (controlling ratio of two or more flows of fluid or fluent material [G 05 D 11/02](#))
 - 15/06 . Heating or cooling systems
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- 17/00 Use of substances as emulsifying, wetting, dispersing, or foam-producing agents** (flotation agents [B 03 D 1/001](#); used for particular applications, see the relevant classes, e.g. use of substances as detergents [C 11 D](#)) [**3,5**]
- 17/02 . Alkyl sulfonates or sulfuric acid ester salts derived from monohydric alcohols
 - 17/04 . Sulfonates or sulfuric acid ester salts derived from polyhydric alcohols or amino alcohols or derivatives thereof (sulfated or sulfonated fatty oils [17/08](#))
 - 17/06 . Esters of higher fatty acids with hydroxyalkylated sulfonic acids or salts thereof
 - 17/08 . Sulfation or sulfonation products of fats, oils, waxes, or higher fatty acids or esters thereof with monovalent alcohols
 - 17/10 . Derivatives of low-molecular-weight sulfocarboxylic acids or sulfopolycarboxylic acids
 - 17/12 . Sulfonates of aromatic or alkylated aromatic compounds
 - 17/14 . Derivatives of phosphoric acid
 - 17/16 . Amines or polyamines
 - 17/18 . Quaternary ammonium compounds
 - 17/20 . Phosphonium and sulfonium compounds
 - 17/22 . Amides or hydrazides
 - 17/24 . . Amides of higher fatty acids with aminoalkylated sulfonic acids
 - 17/26 . Sulfonamides
 - 17/28 . Aminocarboxylic acids (protein hydrolysates [17/30](#))
 - 17/30 . Proteins; Protein hydrolysates
 - 17/32 . Heterocyclic compounds
 - 17/34 . Higher-molecular-weight carboxylic acid esters ([17/06](#) takes precedence)
 - 17/36 . . Esters of polycarboxylic acids
 - 17/38 . Alcohols, e.g. oxidation products of paraffins
 - 17/40 . Phenols
 - 17/42 . Ethers, e.g. polyglycol ethers of alcohols or phenols
 - 17/44 . . Ether carboxylic acids
 - 17/46 . . Ethers of aminoalcohols
 - 17/48 . . Cellulose ethers
 - 17/50 . Derivatives of lignin
 - 17/52 . Natural or synthetic resins or their salts
 - 17/54 . Silicon compounds
 - 17/56 . Glucosides; Mucilage; Saponines
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