

## SECTION C — CHEMISTRY; METALLURGY

**C11 ANIMAL OR VEGETABLE OILS, FATS, FATTY SUBSTANCES OR WAXES; FATTY ACIDS THEREFROM; DETERGENTS; CANDLES****C11B PRODUCING, e.g. BY PRESSING RAW MATERIALS OR BY EXTRACTION FROM WASTE MATERIALS, REFINING OR PRESERVING FATS, FATTY SUBSTANCES, e.g. LANOLIN, FATTY OILS OR WAXES; ESSENTIAL OILS; PERFUMES (drying-oils C09F)****Subclass index****PRODUCTION**

of fats or fatty oils.....	1/00, 13/00
of other fatty substances.....	11/00
REFINING, PRESERVING, SOLIDIFYING.....	3/00, 5/00, 7/00, 15/00
ESSENTIAL OILS, PERFUMES.....	9/00

**1/00 Production of fats or fatty oils from raw materials**

- 1/02 • Pretreatment
- 1/04 • • of vegetable raw material
- 1/06 • by pressing
- 1/08 • • by hot pressing
- 1/10 • by extracting
- 1/12 • by melting out
- 1/14 • • with hot water or aqueous solutions
- 1/16 • • with steam

**3/00 Refining fats or fatty oils**

- 3/02 • by chemical reaction
- 3/04 • • with acids
- 3/06 • • with bases
- 3/08 • • with oxidising agents
- 3/10 • by adsorption

**Note(s) [2006.01]**

When classifying in this group, classification is also made in group B01D 15/08 insofar as subject matter of general interest relating to chromatography is concerned.

- 3/12 • by distillation

- 3/14 • • with the use of indifferent gases or vapours, e.g. steam

- 3/16 • by mechanical means

**5/00 Preserving by using additives, e.g. anti-oxidants****7/00 Separation of mixtures of fats or fatty oils into their constituents, e.g. saturated oils from unsaturated oils****9/00 Essential oils; Perfumes** (synthesis of chemical substances C07)

- 9/02 • Recovery or refining of essential oils from raw materials

**11/00 Recovery or refining of other fatty substances, e.g. lanolin, waxes** (synthetic waxes C07, C08; mineral waxes C10G)**13/00 Recovery of fats, fatty oils, or fatty acids from waste materials** (mechanical separation from waste water C02F, E03F)

- 13/02 • from soap stock
- 13/04 • from spent adsorption materials

**15/00 Solidifying fatty oils, fats, or waxes by physical processes****C11C FATTY ACIDS FROM FATS, OILS OR WAXES; CANDLES; FATS, OILS OR FATTY ACIDS BY CHEMICAL MODIFICATION OF FATS, OILS, OR FATTY ACIDS OBTAINED THEREFROM****1/00 Preparation of fatty acids from fats, fatty oils, or waxes; Refining the fatty acids** (recovery of fatty acids from waste materials C11B 13/00)

- 1/02 • from fats or fatty oils
- 1/04 • • by hydrolysis
- 1/06 • • • using solid catalysts
- 1/08 • Refining
- 1/10 • • by distillation

**3/00 Fats, oils, or fatty acids by chemical modification of fats, oils, or fatty acids obtained therefrom** (sulfonated fats or oils C07C 309/62; vulcanised oils, e.g. factice C08H 3/00)

- 3/02 • by esterification of fatty acids with glycerol
- 3/04 • by esterification of fats or fatty oils
- 3/06 • • with glycerol
- 3/08 • • with fatty acids
- 3/10 • • Ester interchange
- 3/12 • by hydrogenation

3/14 • by isomerisation

5/00 **Candles**

5/02 • Apparatus for preparation thereof

**C11D DETERGENT COMPOSITIONS; USE OF SINGLE SUBSTANCES AS DETERGENTS; SOAP OR SOAP-MAKING; RESIN SOAPS; RECOVERY OF GLYCEROL****Note(s)**

1. When classifying in the mixture groups of this subclass, any individual ingredient of a composition which is not identified by such classification, and which itself is determined to be novel and non-obvious, must also be classified in groups C11D 1/00-C11D 9/00. The individual ingredient can be either a single substance or a composition in itself.
2. Any ingredient of a composition which is not identified by the classification according to Note (1) above, and which is considered to represent information of interest for search, may also be classified in groups C11D 1/00-C11D 9/00. This can, for example, be the case when it is considered of interest to enable searching of compositions using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".

**Subclass index****SURFACE-ACTIVE DETERGENTS**

Non-soap..... 1/00, 3/00

Based on soap..... 9/00

**NON-SURFACE-ACTIVE DETERGENTS..... 7/00****DETERGENT MIXTURES..... 10/00, 11/00****SOAP-MAKING; GLYCEROL..... 13/00, 15/00, 19/00****SHAPE..... 17/00****Surface-active non-soap detergents****1/00 Detergent compositions based essentially on surface-active compounds; Use of these compounds as a detergent****Note(s)**

In groups C11D 1/02-C11D 1/88, in the absence of an indication to the contrary, a compound is classified in the last appropriate place.

- 1/02 • Anionic compounds
- 1/04 • • Carboxylic acids or salts thereof (soap C11D 9/00)
- 1/06 • • • Ether- or thioether carboxylic acids
- 1/08 • • • Polycarboxylic acids containing no nitrogen or sulfur
- 1/10 • • • Amino carboxylic acids; Imino carboxylic acids; Fatty acid condensates thereof
- 1/12 • • Sulfonic acids or sulfuric acid esters; Salts thereof (C11D 3/065 takes precedence)
- 1/14 • • • derived from aliphatic hydrocarbons or mono-alcohols
- 1/16 • • • derived from divalent or polyvalent alcohols
- 1/18 • • • derived from amino alcohols
- 1/20 • • • • Fatty acid condensates
- 1/22 • • • derived from aromatic compounds
- 1/24 • • • • containing ester or ether groups directly attached to the nucleus
- 1/26 • • • derived from heterocyclic compounds
- 1/28 • • • Sulfonation products derived from fatty acids or their derivatives, e.g. esters, amides
- 1/29 • • • Sulfates of polyoxyalkylene ethers [2]
- 1/30 • • • Sulfonation products derived from lignin
- 1/32 • • Protein hydrolysates; Fatty acid condensates thereof
- 1/34 • • Derivatives of acids of phosphorus
- 1/36 • • of unknown constitution
- 1/37 • • Mixtures of compounds all of which are anionic

- 1/38 • Cationic compounds
- 1/40 • • Monoamines or polyamines; Salts thereof
- 1/42 • • Amino alcohols or amino ethers
- 1/44 • • • Ethers of polyoxyalkylenes with amino alcohols; Condensation products of epoxyalkanes with amines
- 1/46 • • Esters of carboxylic acids with amino alcohols; Esters of amino carboxylic acids with alcohols
- 1/48 • • N-containing polycondensation products
- 1/50 • • Derivatives of urea, thiourea, cyanamide, guanidine or urethanes
- 1/52 • • Carboxylic amides, alkylolamides or imides (C11D 3/07 takes precedence)
- 1/54 • • Hydrazides of carboxylic acids
- 1/56 • • containing nitro or nitroso groups
- 1/58 • • Heterocyclic compounds
- 1/60 • • Sulfonium or phosphonium compounds
- 1/62 • • Quaternary ammonium compounds
- 1/64 • • of unknown constitution
- 1/645 • • Mixtures of compounds all of which are cationic
- 1/65 • • Mixtures of anionic with cationic compounds
- 1/655 • • • of sulfonated products with alkylolamides of carboxylic acids (C11D 3/066 takes precedence)
- 1/66 • Non-ionic compounds
- 1/68 • • Alcohols; Oxidation products of paraffin wax, other than acids
- 1/70 • • Phenols
- 1/72 • • Ethers of polyoxyalkylene glycols (C11D 3/075 takes precedence)
- 1/722 • • Ethers of polyoxyalkylenes having mixed oxyalkylene groups [2]
- 1/74 • • Carboxylates or sulfonates of polyoxyalkylene glycols
- 1/75 • • Amino oxides [2]
- 1/755 • • Sulfoxides [2]

- 1/76 • • Synthetic resins containing no nitrogen
- 1/78 • • Neutral esters of acids of phosphorus
- 1/79 • • Phosphine oxides [2]
- 1/80 • • Derivatives of lignin containing no sulfo- or sulfate groups
- 1/82 • • Compounds containing silicon
- 1/825 • • Mixtures of compounds all of which are non-anionic
- 1/83 • • Mixtures of non-ionic with anionic compounds
- 1/831 • • • of sulfonates with ethers of polyoxyalkylenes without phosphates
- 1/835 • • Mixtures of non-ionic with cationic compounds
- 1/86 • • Mixtures of anionic, cationic, and non-ionic compounds
- 1/88 • • Ampholytes; Electroneutral compounds [2]
- 1/90 • • Betaines [2]
- 1/92 • • Sulfobetaines [2]
- 1/94 • • Mixtures with anionic, cationic or non-ionic compounds [2]

### 3/00 Other compounding ingredients of detergent compositions covered in group C11D 1/00

#### Note(s)

In groups C11D 3/02-C11D 3/39, in the absence of an indication to the contrary, a compound is classified in the last appropriate place.

- 3/02 • Inorganic compounds
- 3/04 • • Water-soluble compounds
- 3/06 • • • Phosphates, including polyphosphates
- 3/065 • • • • in admixture with sulfonated products
- 3/066 • • • • • and with alkylolamides of carboxylic acids
- 3/07 • • • • in a mixture with alkylolamides of carbocyclic acids
- 3/075 • • • • in admixture with ethers of polyoxyalkylenes
- 3/08 • • • Silicates
- 3/10 • • • Carbonates
- 3/12 • • Water-insoluble compounds
- 3/14 • • • Pigments; Fillers; Abrasives
- 3/16 • Organic compounds
- 3/18 • • Hydrocarbons
- 3/20 • • containing oxygen
- 3/22 • • • Carbohydrates or derivatives thereof
- 3/24 • • containing halogen
- 3/26 • • containing nitrogen
- 3/28 • • • Heterocyclic compounds containing nitrogen in the ring
- 3/30 • • • Amines; Substituted amines
- 3/32 • • • Amides; Substituted amides
- 3/33 • • • Amino carboxylic acids [2]
- 3/34 • • containing sulfur
- 3/36 • • containing phosphorus
- 3/37 • • Polymers [2]
- 3/38 • • Products with no well-defined composition
- 3/382 • • • Vegetable products, e.g. soya meal, wood flour, sawdust [2]
- 3/384 • • • Animal products [2]
- 3/386 • • • Preparations containing enzymes [2]
- 3/39 • Organic or inorganic per-compounds [2]
- 3/395 • Bleaching agents [2]
- 3/40 • Dyes [2]
- 3/42 • • Brightening agents [2]
- 3/43 • Solvents [2]

- 3/44 • • Mixed solvents
- 3/46 • Superfatting agents [2]
- 3/48 • Medicinal or disinfecting agents [2]
- 3/50 • Perfumes [2]
- 3/60 • Mixtures of compounding ingredients [2]

### 7/00 Compositions of detergents based essentially on non-surface-active compounds

#### Note(s)

In groups C11D 7/02-C11D 7/22, in the absence of an indication to the contrary, a compound is classified in the last appropriate place.

- 7/02 • Inorganic compounds
- 7/04 • • Water-soluble compounds
- 7/06 • • • Hydroxides
- 7/08 • • • Acids
- 7/10 • • • Salts
- 7/12 • • • • Carbonates
- 7/14 • • • • Silicates
- 7/16 • • • • Phosphates including polyphosphates
- 7/18 • • Peroxides; Persalts
- 7/20 • • Water-insoluble oxides
- 7/22 • Organic compounds
- 7/24 • • Hydrocarbons
- 7/26 • • containing oxygen
- 7/28 • • containing halogen
- 7/30 • • • Halogenated hydrocarbons
- 7/32 • • containing nitrogen
- 7/34 • • containing sulfur
- 7/36 • • containing phosphorus
- 7/38 • • Per-compounds
- 7/40 • • Products in which the composition is not well defined
- 7/42 • • • Preparations containing enzymes
- 7/44 • • • Vegetable products (C11D 7/42 takes precedence)
- 7/46 • • • Animal products (C11D 7/42 takes precedence)
- 7/50 • Solvents [2]
- 7/52 • • combined with promoters [2]
- 7/54 • Bleaching agents [2]
- 7/56 • • combined with phosphates [2]
- 7/60 • Mixtures of non-surface-active compounds [2]

### Soap Detergents

### 9/00 Compositions of detergents based essentially on soap (compositions containing resin soap C11D 15/04)

- 9/02 • on alkali or ammonium soaps
- 9/04 • containing compounding ingredients other than soaps

#### Note(s)

In groups C11D 9/06-C11D 9/42, in the absence of an indication to the contrary, a compound is classified in the last appropriate place.

- 9/06 • • Inorganic compounds
- 9/08 • • • Water-soluble compounds
- 9/10 • • • • Salts
- 9/12 • • • • • Carbonates
- 9/14 • • • • • Phosphates; Polyphosphates

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- 9/16 • • • • Borates
- 9/18 • • • Water-insoluble compounds
- 9/20 • • • • Pigments; Fillers; Abrasives
- 9/22 • • Organic compounds
- 9/24 • • • Hydrocarbons
- 9/26 • • • containing oxygen
- 9/28 • • • containing halogen
- 9/30 • • • containing nitrogen
- 9/32 • • • containing sulfur
- 9/34 • • • containing phosphorus
- 9/36 • • • containing silicon
- 9/38 • • • Products in which the composition is not well defined
- 9/40 • • • Proteins
- 9/42 • • Per-compounds
- 9/44 • • Perfumes; Colouring materials; Brightening agents
- 9/48 • • Superfating agents
- 9/50 • • Medicinal or disinfecting agents
- 9/60 • • Mixtures of compounding ingredients [2]

### 10/00 Compositions of detergents, not provided for by any single one of main groups C11D 1/00-C11D 9/00 [2]

- 10/02 • based on mixtures of surface-active non-soap and non-surface-active compounds [2]
- 10/04 • based on mixtures of surface-active non-soap compounds and soap [2]
- 10/06 • based on mixtures of non-surface-active compounds and soap [2]

### 11/00 Special methods for preparing compositions containing mixtures of detergents

- 11/02 • Preparation in the form of powder by spray-drying
- 11/04 • by chemical means, e.g. sulfonating in the presence of other compounding ingredients followed by neutralising

## Soap or soap-making; Resin soaps

### 13/00 Making of soap or soap solutions in general; Apparatus therefor (resin soap C11D 15/00)

- 13/02 • Boiling soap; Refining
- 13/04 • • Continuous methods therefor
- 13/06 • • Bleaching of soap or soap solutions
- 13/08 • Colouring or perfuming
- 13/10 • Mixing; Kneading
- 13/12 • Cooling (C11D 13/14 takes precedence)
- 13/14 • Shaping
  - 13/16 • • in moulds
  - 13/18 • • by extrusion or by pressing
  - 13/20 • • in the form of small particles, e.g. powder or flakes
- 13/22 • Cutting
  - 13/24 • • Slicing soap on the cooling drum
- 13/26 • Drying
- 13/28 • Embossing; Polishing
- 13/30 • Recovery of soap, e.g. from spent solutions

### 15/00 Manufacture of resin soap or soaps derived from naphthenic acids; Compositions

- 15/02 • Apparatus therefor
- 15/04 • Compositions containing resin soap or soap derived from naphthenic acids

### 17/00 Detergent materials or soaps characterised by their shape or physical properties (shaping soap C11D 13/14)

- 17/02 • Floating bodies of detergents
- 17/04 • combined with or containing other objects
- 17/06 • Powder; Flakes; Free-flowing mixtures; Sheets
- 17/08 • Liquid soap; capsuled

### 19/00 Recovery of glycerol from a saponification liquor