

C11D

DETERGENT COMPOSITIONS; USE OF SINGLE SUBSTANCES AS DETERGENTS; SOAP OR SOAP MAKING; RESIN SOAPS; RECOVERY OF GLYCEROL

Definition statement

This subclass/group covers:

- Detergent compositions; they are cleaning or washing compositions. Fabric softening compositions are also included.
- Detergent compositions based essentially on surface-active compounds, such as anionic, cationic, amphoteric or nonionic surfactants;
- Compounding ingredients for such compositions, e.g. compounds such as carbonate or polymer;
- Compounding ingredients characterised by their effect or property;
- Detergent compositions based essentially on non-surface active compounds, which means no surfactant is present;
- Detergent compositions based essentially on soap;
- Use of single substances, such as surface-active compounds, as detergents;
- Detergent compositions based on more than one type of compound;
- Methods of preparing compositions containing mixtures of detergents;
- Special cleaning and washing methods;
- Making soap or soap solutions in general;
- Making resin soap or soaps derived from naphthenic acids, and compositions thereof;
- Detergent materials or soaps characterised by their physical properties;
- Recovery of glycerol from a saponification liquor.

Relationship between large subject matter areas

Cosmetic preparations comprising surfactants are classified in [A61K](#) and [A61Q](#); they include washing the hair, cleaning the teeth or mouth, cleansing the body (e.g. shower preparation).

Liquid soaps and soap bars and syndet bars are only classified in [C11D](#).

References relevant to classification in this group

This subclass/group does not cover:

Chemical paint or ink removers	C09D 9/00
Cleaning or degreasing metallic material by chemical methods other than electrolysis in the industry	C23G
Bleaching or washing of fibres, raw textiles (in the textile industry); dry cleaning of fibres, fabrics	D06L
Treating fibres or fabrics with chemicals	D06M

Examples of places where the subject matter of this group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Preparations specially adapted for washing the hair, cleaning the teeth or mouth, cleansing the body (e.g. shower preparation)	A61K 8/00 , A61Q 5/00 , A61Q 19/00
Special washing compositions for cleaning semi-permeable membranes	B01D 65/06

Informative references

Attention is drawn to the following places, which may be of interest for search:

Disinfectants as such	A01N
Methods or apparatus for disinfection or sterilisation	A61L
Use of substances as emulsifying, wetting, dispersing or foam-producing agents	B01F 17/00
Refining glycerol	C07C 31/22
Polishing compositions	C09G

Method of cleaning	B08B
Stripping of photoresist material	G03F 7/42
Chemical treatment or cleaning of semiconductor	H01L 21/306 , H01L 21/02041
Cleaning or polishing of printed circuits	H05K 3/26
Microcapsules	B01J 13/02
Enzymes	C12N
Organic compounds	C07
Polymers	C08
Anti foam compositions	B01D 19/04
Devices for adding washing or cleaning ingredients into the washing or dishwashing machine	D06F 39/02 , A47L 15/4409
Cloth, pads, sponges containing cleaning ingredients	A47L 13/17 , A47L 1/15

Special rules of classification within this group

Each relevant compound / composition is classified according to the rules in the most appropriate place.

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.

Any ingredient of a composition which is not identified by the above classification, and which is considered to represent information of interest for search, may also be classified in groups [C11D 1/00-C11D 9/00](#).

In groups [C11D 1/02-C11D 1/94](#), [C11D 3/02-C11D 3/39](#), [C11D 7/02-C11D 7/46](#) and [C11D 9/06-C11D 9/42](#), in the absence of an indication to the contrary, classification is made in the last appropriate place.

To decide whether a composition/compound is classified in [C11D 3/00](#) or in [C11D 7/00](#) the whole document is taken into account to find out if surfactants are present or not.

Documents classified in the mixture groups [C11D 1/37](#), [C11D/645](#) to [C11D 1/655](#), [C11D 1/825](#) to [C11D 1/86](#), [C11D 1/94](#) to **C11D1/94D**, [C11D 10/04](#) to [C11D 10/047](#) are indexed using Indexing Codes from [C11D 1/00](#) to [C11D 1/92](#) to provide information on the individual surfactant.

Compositions comprising solvent mixtures or a list of alternatives are classified in [C11D 3/43](#) or [C11D 7/50](#) and the single components may be classified as Indexing Codes from [C11D 3/00](#) or [C11D 7/00](#).

For classes [C11D 3/2003](#), [C11D 3/2006](#), [C11D 3/2041](#), [C11D 3/34](#), [C11D 3/3905](#) and [C11D 3/3907](#) in case of mixtures or a list of alternatives, Indexing Codes of [C11D 3/2003](#), [C11D 3/34](#), [C11D 3/3905](#) are used for classifying the individual compounds.

Polymers are only classified in the top group [C11D 3/37](#) in rare cases; dependent claims, examples and description should be taken into account and then the specific ones should be classified.

e.g. in claim 1 a polymer is claimed, in the description and dependent claims polyacrylate and carboxymethylcellulose are disclosed, the polymer is therefore classified in [C11D 3/3757](#) and [C11D 3/225](#).

The same is applied to per compounds and bleaching compounds in [C11D 3/39](#) and [C11D 3/395](#).

Carboxylic acid mixtures or alternatives are classified in [C11D 3/2075](#); if specific acids are claimed they can be classified in the specific groups.

Block copolymers such as EOPO, Pluronics being surfactants are classified in [C11D 1/008](#); if they are not used as surfactant, they are classified in [C11D 3/3707](#).

In [C11D 3/0005](#) the compounds / compositions are characterised by their effect or properties. Documents classified therein are also classified in other groups of [C11D](#) according to the chemical nature of the compounds as such.

In compositions comprising e.g. an unspecified surfactant and carbonates, only the carbonates are classified; i.e. in [C11D 3/10](#).

In compositions comprising e.g. ethoxylated alcohol surfactant and carbonates, both, the specific surfactant and the carbonates are classified, i.e. in [C11D 1/72](#) and [C11D 3/10](#).

Polymers, enzymes, percompounds, bleaching agents, dyes, brightening agent and disinfecting, antibacterial, microbicidal agents in compositions without surfactants are classified in [C11D 3/00](#).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Amphoteric surfactant	Amphoteric surfactants contain both acidic and basic groups in their molecule, and can act as cationic or anionic detergents, depending on the pH of the solution, or as both cation and anion. Betains are included.
Anionic surfactant	Anionic surfactants have a negatively-charged surface-active ion. An example is sodium alkylbenzene sulfonate.
Cationic surfactant	Cationic surfactants may have a positively-charged cation; typical are the quaternary ammonium salts; they may also be amides or amines.
Compounding ingredients	The non-surface-active ingredients in a detergent composition, e.g. builder, water-softening agents, solvent.
Detergents	Detergents are basically any cleaning materials. Such materials may or may not contain surfactants. The term "synthetic detergent" is also used as a synonym for "surfactant" (excluding soaps, which are not considered synthetic), which is a compound, or a mixtures of compounds, whose molecules have two distinct regions – one that is hydrophilic and has an affinity for water, and another that is hydrophobic, with little (if any) affinity for water. These compounds can aid in the solubilisation of hydrophobic compounds in water. See examples below of particular types of surfactant (detergent).
Nonionic surfactant	Nonionic surfactants are synthetic surface active agents which are such that the molecules do not ionise in aqueous solution. Typical are ethoxylated fatty alcohols, amine oxides. .
Resin soap	A yellow soap containing resin, used

	for bleaching. It is made by adding a certain quantity of resin (rosin or colophony), as much as 50 % and more of the fat employed, to the mass in the soap boiler towards the end of the process.
Soaps	Soaps have the same properties as those mentioned above for surfactants, but in general soaps are not considered as synthetic detergents. Soap is a particular type of surfactant derived from oils and fats, and is created through the saponification process whereby the ester linkage in a vegetable oil or fat is hydrolytically cleaved using an alkali or (NaOH or KOH) or ammonia or amine yielding glycerol and crude soap. Soaps usually consist of the alkaline salts of fatty acids such as palmitic, stearic or oleic acids. Soft soaps contain the potassium salts, whereas the sodium salts are hard soaps. Soaps are examples of anionic surfactants.
Surface-active compounds/agents (surfactants)	Substances which have the effect of reducing the surface tension of a solvent, an example being a detergent/surfactant or soap dissolved in water. These substances, also known as wetting agents, contain a combination of polar (hydrophilic) and non-polar (hydrophobic) parts which serve to bind oil and water together. They locate at the phase boundary between the water phase and the organic phase, or if there is no room there, they will congregate together and form micelles. Both synthetic detergents and soaps are surfactants.
Surfactants	See "Surface-active compounds/agents".

C11D 1/00

Detergent compositions based essentially on surface-active compounds; Use of these compounds as a detergent

Definition statement

This subclass/group covers:

Detergents compositions based on surfactants, surface active agents

[C11D 1/00](#)- [C11D 1/94](#) subgroups

C11D 3/00

Other compounding ingredients of detergent compositions covered in group [C11D 1/00](#)

Definition statement

This subclass/group covers:

Inorganic compounds

[C11D 3/02](#)- [C11D 3/14](#), subgroups

Organic components

[C11D 3/16](#)- [C11D 3/386](#), subgroups

Per components

[C11D 3/39](#), subgroups

Bleaching components

[C11D 3/395](#) subgroups

Dyes; brightening agents, fluorescers

[C11D 3/40](#), [C11D 3/42](#), subgroups

Solvents

[C11D 3/43](#),

Germicidal, antibacterial, antimicrobial compounds / compositions

[C11D 3/48](#) subgroups

Perfumes

[C11D 3/50](#) subgroups

Compounds / compositions by their effect or properties

[C11D 3/0005](#) subgroups

C11D 7/00

Compositions of detergents based essentially on non-surface-active compounds

Definition statement

This subclass/group covers:

Inorganic compounds

[C11D 7/02](#)- [C11D 7/20](#), subgroups

Organic components

[C11D 7/22](#)- [C11D 7/46](#), subgroups

Solvents

[C11D 3/43](#),

[C11D 7/50](#) subgroups

C11D 9/00

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

Definition statement

This subclass/group covers:

Inorganic compounds,

[C11D 9/06](#)- [C11D 9/18](#) subgroups

Organic components,

[C11D 9/22](#)- [C11D 9/40](#) subgroups

Per components

[C11D 9/42](#)

Bleaching components

[C11D 9/446](#)

Dyes; brightening agents, fluorescers

[C11D 9/444](#), [C11D 9/448](#) subgroups

Perfumes

[C11D 9/442](#) subgroups

Superfating agents

[C11D 9/48](#)

Soap or making soap or soap solutions

[C11D 9/00-C11D 9/04](#) subgroups

References relevant to classification in this group

This subclass/group does not cover:

Compositions containing resin soap	C11D 15/04
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C11D 10/00

Compositions of detergents, not provided for by one single preceding group

Definition statement

This subclass/group covers:

Mixtures of soap and non soap surfactants

[C11D 10/04](#) subgroups

C11D 11/00

Special methods for preparing compositions containing mixtures of detergents [N: (in the form of blocks, bars, tablets [C11D 17/0047](#)); Methods for using cleaning compositions]

Definition statement

This subclass/group covers:

Preparation of compositions

[C11D 11/00](#), [C11D 11/0082-C11D 11/04](#) subgroups

Special cleaning and washing methods

[C11D 11/0005](#) subgroups

References relevant to classification in this group

This subclass/group does not cover:

Special methods for preparing compositions containing mixture of detergents in the form of blocks, bars, tablets	C11D 17/0047
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C11D 13/00

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

Definition statement

This subclass/group covers:

Soap or making soap or soap solutions

[C11D 13/00](#) subgroups

References relevant to classification in this group

This subclass/group does not cover:

Resin soap	C11D 15/00
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C11D 15/00

Manufacture of resin soap or soap derived from naphthenic acids; Compositions

Definition statement

This subclass/group covers:

Resin soaps and making them

C11D 17/00

Detergent materials characterised by their shape or physical properties [N: (soaps [C11D 9/00](#), shaping soap [C11D 13/00](#))]

Definition statement

This subclass/group covers:

Preparation of compositions

[C11D 17/0047](#)

insoluble particles, or aqueous structured, or colloidal solutions;

fixed on solid detergent ingredients,

coated component /composition, for use with aerosol

[C11D 17/0004-C11D 17/0003](#) subgroups

[C11D 17/0034-C11D 17/0043](#)

Bars, cakes, blocks or tablets

solid transparent soap or detergent

[C11D 17/0047](#)

[C11D 17/0095](#)

Floating bodies

[C11D 17/02](#)

Combined with or containing other objects such as soluble or insoluble containers, dispensers, wipes, pads

[C11D 17/04](#) subgroups

Powder, flakes, sheets

[C11D 17/06](#) subgroups

Liquid soap

[C11D 17/08](#)

References relevant to classification in this group

This subclass/group does not cover:

Soaps	C11D 9/00
Shaping soap	C11D 13/00

C11D 19/00

Recovery of glycerol from a saponification liquor (refining

glycerol [C07C 31/22](#))

Definition statement

This subclass/group covers:

Recovery of glycerol

References relevant to classification in this group

This subclass/group does not cover:

Refining of glycerol	C07C 31/22
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