

C11D

DETERGENT COMPOSITIONS (preparations specially adapted for washing the hair [A61Q 5/02](#), [A61K 8/00](#); methods or apparatus for disinfection or sterilisation [A61L](#); special washing compositions for cleaning semi-permeable membranes [B01D 65/06](#)); USE OF SINGLE SUBSTANCES AS DETERGENTS; SOAP OR SOAP-MAKING; RESIN SOAPS; RECOVERY OF GLYCEROL

Definition statement

This place covers:

- Detergent compositions used for cleaning or washing. Fabric softening compositions.
- 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.

Relationships with other classification places

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

Limiting references

This place 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

Application-oriented references

Examples of places where the subject matter of this place 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
Cloth, pads, sponges containing cleaning ingredients	A47L 13/17 , A47L 1/15
Methods or apparatus for disinfection or sterilisation	A61L
Anti foam compositions	B01D 19/04
Use of substances as emulsifying, wetting, dispersing or foam-producing agents	B01F 17/00
Microcapsules	B01J 13/02
Method of cleaning	B08B
Organic compounds	C07
Refining glycerol	C07C 31/22
Polymers	C08
Polishing compositions	C09G
Enzymes	C12N
Devices for adding washing or cleaning ingredients into the washing or dishwashing machine	D06F 39/02 , A47L 15/4409
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

Special rules of classification

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 1/645](#) - [C11D 1/655](#), [C11D 1/825](#) - [C11D 1/86](#), [C11D 1/94](#) - [C11D 1/945](#), [C11D 10/04](#) - [C11D 10/047](#) are indexed using Indexing Codes from [C11D 1/00](#) - [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 place, 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.
Syndet bars	Piece of hard soap made from synthetic surfactants.
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 place covers:

Detergents compositions based on surfactants, surface active agents

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

C11D 1/008

{Polymeric surface-active agents (see [C11D 1/48](#), [C11D 1/662](#), [C11D 1/76](#))}

References**Limiting references**

This place does not cover:

N-containing polycondensation products	C11D 1/48
Non ionic compounds being carbohydrates or derivatives	C11D 1/662
Non-ionics compounds being synthetic resins containing no nitrogen	C11D 1/76

C11D 1/04

Carboxylic acids or salts thereof {(see also [C11D 9/005](#))}

References**Limiting references**

This place does not cover:

Synthetic soaps	C11D 9/005
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C11D 1/10

Amino-carboxylic acids; Imino-carboxylic acids; Fatty acid condensates thereof {(betaines [C11D 1/90](#))}

References**Limiting references**

This place does not cover:

Sulfonation products derives from fatty acids or their derivatives, e.g. esters, amides	C11D 1/28
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C11D 1/385

{Cationic compounds containing P (phosphonium compounds [C11D 1/60](#))}

References**Limiting references**

This place does not cover:

Sulfonium or phosphonium compounds	C11D 1/60
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C11D 1/528

{Carboxylic amides ($R^1\text{-CO-NR}^2\text{R}^3$), where at least one of the chains R^1 , R^2 or R^3 is interrupted by a functional group, e.g. a -NH-, -NR-, -CO-, or -CON- group (ethers [C11D 1/526](#))}

References

Limiting references

This place does not cover:

Carboxylic amides ($R^1\text{-CO-NR}^2\text{R}^3$), where R^1 , R^2 or R^3 are polyalkoxylated	C11D 1/526
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C11D 1/667

{Neutral esters, e.g. sorbitan esters; see also [C11D 1/74](#) and [C11D 1/78](#)}

References

Limiting references

This place does not cover:

Carboxylates or sulfonates esters of polyoxyalkylene glycols	C11D 1/74
Neutral esters of acids of phosphorous	C11D 1/78

C11D 3/00

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

Definition statement

This place covers:

Components of detergent compositions that are not classified in [C11D 1/00](#), i.e. not surface-active components comprised in a mixture of surfactant and non-surfactant compounds e.g mixture of zeolithes and surfactants

Special rules of classification

In the groups [C11D 3/02](#) - [C11D 3/39](#): classification is according to the last place rule priority

A mixture of surfactants, soaps with/without zeolithes is classified in [C11D 10/00](#)

C11D 3/0005

{Other compounding ingredients characterised by their effect}

Special rules of classification

Documents classified in the subgroups [C11D3/005](#)-[C11D 3/0094](#) are also classified in other groups of the [C11D](#) subclass according to the chemical nature of the compounds as such.

C11D 3/0078

{Compositions for cleaning contact lenses, spectacles, lenses (disinfecting contact lenses [A61L 2/00](#); mechanical cleaning [G02C 13/00](#))}

References**Limiting references**

This place does not cover:

Disinfecting contact lenses	A61L 2/00
Mechanical cleaning	G02C 13/00

C11D 3/14

Fillers; Abrasives; {Abrasive compositions; Suspending or absorbing agents not provided for in one single group of [C11D 3/12](#); Specific features concerning abrasives, e.g. granulometry, mixtures (dyes, pigments [C11D 3/40](#))}

References**Limiting references**

This place does not cover:

Dyes, pigments	C11D 3/40
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C11D 3/34

containing sulfur {([C11D 3/162](#), [C11D 3/164](#), [C11D 3/166](#), [C11D 3/168](#) take precedence)}

Special rules of classification

Sulfur containing compounds are classified according to last place rule priority and individual functional groups of the compounds are classified with additional symbols from [C11D 3/3409](#) - [C11D 3/349](#)

C11D 3/37

Polymers {(polymeric surface-active agents [C11D 1/008](#); carbohydrates [C11D 3/22](#))}

References**Limiting references**

This place does not cover:

Polymeric surface-active agents	C11D 1/008
Carbohydrates	C11D 3/22

C11D 3/38636

{containing enzymes other than protease, amylase, lipase, cellulase, oxidase, reductase}

References**Limiting references**

This place does not cover:

Preparations containing chemically modified or immobilised enzymes	C11D 3/386
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Informative references

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

Microorganisms or enzymes	C12N
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C11D 3/3905

{Bleach activators; Bleach catalysts}

Special rules of classification

Bleach activators or bleach catalysts are classified according to the last place rule priority.

In case of mixtures or a list of alternatives, it is classified in [C11D 3/3905](#) or [C11D 3/3907](#) and each component or alternatives is classified with additional symbols from [C11D 3/3907](#) - [C11D 3/3932](#)

C11D 3/3927

{Quaternary ammonium compounds (quaternary ammonium nitriles [C11D 3/3925](#))}

References**Limiting references**

This place does not cover:

Quaternary ammonium nitriles	C11D 3/3925
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C11D 7/00

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

Special rules of classification

In the absence of an indication to the contrary, classification in groups [C11D 7/02](#) - [C11D 7/46](#) is according to last place rule priority

C11D 7/5004**{Organic solvents}****Special rules of classification**

In the subgroups [C11D 7/5004](#) - [C11D 7/5095](#) classification is according to the first place priority rule.

C11D 9/00

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

Definition statement

This place covers:

Compositions of detergents with major component being soap, soap being considered as non-synthetic detergent (see definition in glossary of terms)

References**Limiting references**

This place does not cover:

Compositions containing resin soap	C11D 15/04
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C11D 9/005**{Synthetic soaps (see also [C11D 1/04](#))}****References****Limiting references**

This place does not cover:

Detergents compositions based on carboxylic acids or salts	C11D 1/04
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C11D 9/06**Inorganic compounds****Special rules of classification**

In the subgroups [C11D 9/06](#) - [C11D 9/42](#) classification is according to the last place priority rule.

C11D 9/267**{containing free fatty acids (see also [C11D 9/48](#))}****References****Limiting references**

This place does not cover:

Superfating agents	C11D 9/48
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C11D 10/00**Compositions of detergents, not provided for by one single preceding group****Definition statement***This place covers:*

Mixtures of soap and non soap surfactants

C11D 11/00**Special methods for preparing compositions containing mixtures of detergents {(in the form of blocks, bars, tablets [C11D 17/0047](#)); Methods for using cleaning compositions}****Definition statement***This place covers:*

Any specific features related to processes for preparing compositions containing mixtures of detergents or related to cleaning and washing methods e.g 3 steps in a process, cleaning a mirror

References**Limiting references***This place 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 11/0029**{Metals (degreasing metals [C23G 5/00](#))}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Degreasing metals	C23G 5/00
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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 place covers:*

Soap or making soap or soap solutions

Apparatus therefor

References**Limiting references***This place does not cover:*

Resin soap	C11D 15/00
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C11D 13/20in the form of small particles, e.g. powder, flakes (by slicing [C11D 13/24](#))**References****Limiting references***This place does not cover:*

Slicing soap on the cooling drum	C11D 13/24
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C11D 13/26Drying (drying ovens [F27](#))**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Ovens, Furnaces	F27
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C11D 15/00**Manufacture of resin soap or soaps derived from naphthenic acids;
Compositions****Definition statement***This place covers:*

Resin soaps and making them

C11D 17/00**Detergent materials characterised by their shape or physical properties {(soaps [C11D 9/00](#), shaping soap [C11D 13/00](#))}****Definition statement***This place covers:*

Detergents products characterised by shape, physical properties

References

Limiting references

This place does not cover:

Soaps	C11D 9/00
Shaping soap	C11D 13/00

C11D 17/0026

{Structured liquid compositions, e.g. liquid crystalline phases, network containing non-Newtonian phase, (thixotropic solutions [C11D 17/003](#))}

References

Limiting references

This place does not cover:

Thixotropic solutions	C11D 17/003
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C11D 17/042

{Water soluble or water disintegrable containers or substrates containing cleaning compositions or additives for cleaning compositions (packaging of disintegrable, dissolvable or edible materials [B65D 65/46](#))}

References

Informative references

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

Packaging of disintegrable, dissolvable or edible materials	B65D 65/46
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C11D 17/048

{Soap or detergent bars or cakes with an inner core consisting of insoluble material (floating soaps [C11D 17/02](#))}

References

Limiting references

This place does not cover:

Floating soaps	C11D 17/02
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C11D 19/00

Recovery of glycerol from a saponification liquor (refining glycerol [C07C 31/22](#))

Definition statement

This place covers:

Recovery of glycerol

References

Limiting references

This place does not cover:

Refining of glycerol	C07C 31/22
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