C11D

DETERGENT COMPOSITIONS; 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, animal products 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 groups A61K 8/00, A61Q 5/00 and A61Q 19/00; they include washing the hair, cleaning the teeth or mouth or cleansing the body (e.g. shower preparation).

General cleansing compositions which are usually liquid are classified in groups A61K 8/00, A61Q 5/00 and A61Q 19/00.

Liquid soaps, soap bars (solid cleansing compositions) and syndet bars are only classified in subclass C11D.

References

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:

Cosmetic or similar toiletry preparations	A61K 8/00
Preparations for care of the hair	A61Q 5/00
Preparations for care of the skin	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 or sponges containing cleaning ingredients for cleaning windows	A47L 1/15
Cloth, pads or sponges containing cleaning ingredients for cleaning floors, carpets, furniture, walls or wall coverings	A47L 13/17
Devices for adding washing or cleaning ingredients into the dishwashing machine	A47L 15/44
Methods or apparatus for disinfection or sterilisation	A61L
Anti foam compositions	B01D 19/04
Microcapsules	B01J 13/02
Method of cleaning	B08B
Organic compounds	C07
Refining glycerol	C07C 31/22
Polymers	C08
Chemical paint or ink removers	C09D 9/00
Polishing compositions	C09G
Use of substances as emulsifying, wetting, dispersing or foam-producing agents	C09K 23/00
Enzymes	C12N
Cleaning or degreasing metallic material by chemical methods other than electrolysis in the industry	C23G
Devices for adding washing or cleaning ingredients into the washing	D06F 39/02
Bleaching or washing of fibres, raw textiles (in the textile industry); Dry cleaning of fibres, fabrics	D06L
Treating fibres or fabrics with chemicals	D06M
Stripping of photoresist material	G03F 7/42
Cleaning or polishing of printed circuits	H05K 3/26
Chemical or electrical treatment	H10P 50/00
Cleaning of semiconductor devices	H10P 70/00

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 groups C11D 3/00 or 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 or C11D 10/04 - C11D 10/047 are also classified with additional symbols from groups 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 groups C11D 3/43 or C11D 7/50 and the single components are classified with additional symbols from groups C11D 3/00 or C11D 7/00.

In case of mixture or a list of alternatives in the groups C11D 3/2003, C11D 3/2006, C11D 3/2041, C11D 3/34, C11D 3/3905 and C11D 3/3907, individual compounds are classified with additional symbols of groups C11D 3/2003, C11D 3/34 and C11D 3/3905.

Polymers are only classified in the group C11D 3/37 in rare cases; dependent claims, examples and description should be taken into account and then the specific polymers should be classified.

For example, in claim 1 a polymer is claimed, in the description and dependent claims polyacrylate and carboxymethylcellulose are disclosed, the polymer is therefore classified in groups C11D 3/3757 and C11D 3/225.

The same is applied to per compounds and bleaching compounds in groups C11D 3/39 and C11D 3/395.

Carboxylic acid mixtures or alternatives are classified in group C11D 3/2075; if specific acids are claimed they can be classified in the specific groups.

Block copolymers such as EOPO are classified in group C11D 1/008 when they are used as surfactants; if they are not used as a surfactant, they are classified in group C11D 3/3707.

In group 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.

In compositions comprising an unspecified surfactant and carbonates, only the carbonates are classified in group C11D 3/10.

In compositions comprising ethoxylated alcohol surfactant and carbonates, both the specific surfactant and the carbonates are classified in groups C11D 1/72 and C11D 3/10.

Polymers, enzymes, per compounds, bleaching agents, dyes, brightening agent and disinfecting, antibacterial, microbicidal agents in compositions without surfactants are classified in group 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 or 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 mixture 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 the surfactants based on condensation products of ethylene oxide with a hydrophobe.
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 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 are located 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

Special rules of classification

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

C11D 1/008

{Polymeric surface-active agents}

References

Informative references

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

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

C11D 1/04

Carboxylic acids or salts thereof (soap C11D 9/00)

References

Limiting references

This place does not cover:

Soap	C11D 9/00

C11D 1/10

Amino carboxylic acids; Imino carboxylic acids; Fatty acid condensates thereof

References

Informative references

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

Sulfonation products derives from fatty acids or their derivatives, e.g. esters, amides	C11D 1/28
Betaines	C11D 1/90

C11D 1/123

{derived from carboxylic acids, e.g. sulfosuccinates}

References

Informative references

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

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

C11D 1/385

{Cationic compounds containing P}

References

Informative references

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

Sulfonium or phosphonium compounds	C11D 1/60

C11D 1/528

{Carboxylic amides (R^1-CO-NR^2R^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 (R1-CO-NR2R3), where R1, R2 or R3 are polyalkoxylated	C11D 1/526

C11D 1/667

{Neutral esters, e.g. sorbitan esters}

References

Informative references

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

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

C11D 1/86

Mixtures of anionic, cationic, and non-ionic compounds

Definition statement

This place covers:

A mixture with three or more compounds being anionic, cationic and non-ionic.

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 groups C11D 3/02 - C11D 3/39, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a compound is classified in the last appropriate place.

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 C11D 3/0005 - 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 or lenses}

References

Informative references

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

Disinfecting contact lenses	A61L 12/00
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 or mixtures (dyes, pigments C11D 3/40)}

References

Limiting references

This place does not cover:

Dyes, pigments	C11D 3/40

C11D 3/2079

{Monocarboxylic acids-salts thereof}

References

Informative references

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

Compositions of detergents, not provided for by one single preceding group	C11D 10/00

C11D 3/22

Carbohydrates or derivatives thereof

References

Informative references

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

Graft polymers	C11D 3/3788

C11D 3/34

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

References

Limiting references

This place does not cover:

Organic compound of detergent composition containing Si	C11D 3/162
Organic compound of detergent composition containing a carbon-carbon triple bond	C11D 3/164
Organic compound of detergent composition containing borium	C11D 3/166
Organometallic compound or organometalic complexes of detergent composition	C11D 3/168

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; polysaccharides C11D 3/222)}

References

Limiting references

This place does not cover:

Polymeric surface-active agents	C11D 1/008
Polysaccharides	C11D 3/222

C11D 3/38636

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

References

Informative references

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

Preparations containing chemically modified or immobilised enzymes	C11D 3/386
Microorganisms or enzymes	C12N

C11D 3/38663

{Stabilised liquid enzyme compositions}

References

Informative references

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

Micro-organisms or enzymes	C12N

C11D 3/3905

{Bleach activators or 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 the individual alternatives are classified with additional symbols from C11D 3/3907 - C11D 3/3932.

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, in groups C11D 7/02 - C11D 7/46 a compound is classified in the last appropriate place.

C11D 7/5004

{Organic solvents}

Special rules of classification

In the subgroups C11D 7/5004 - C11D 7/5095, classification is made in the first appropriate place.

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

C11D 9/005

{Synthetic soaps}

References

Informative references

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

Detergents compositions based on carboxylic acids or salts	C11D 1/04

C11D 9/06

Inorganic compounds

Special rules of classification

In groups C11D 9/06 - C11D 9/42, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a compound is classified in the last appropriate place.

C11D 9/267

{containing free fatty acids}

References

Informative references

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

Superfatting agents	C11D 9/48

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

Definition statement

This place covers:

Any specific features related to processes for preparing compositions containing mixtures of detergents.

References

Informative references

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

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

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

C11D 13/20

in the form of small particles, e.g. powder or flakes

References

Informative references

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

Slicing soap on the cooling drum	C11D 13/24

C11D 13/26

Drying

References

Informative references

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

Ovens, Furnaces	F27

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 or soaps characterised by their shape or physical properties (shaping soap C11D 13/14)

Definition statement

This place covers:

Detergents products characterised by shape, physical properties

References

Limiting references

This place does not cover:

Shaping soap	C11D 13/14

Informative references

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

Soaps	C11D 9/00

C11D 17/042

{Water soluble or water disintegrable containers or substrates containing cleaning compositions or additives for cleaning compositions}

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

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

C11D 19/00

Recovery of glycerol from a saponification liquor

Definition statement

This place covers:

Recovery of glycerol

References

Informative references

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

Refining of glycerol	C07C 31/22