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:

<table>
<thead>
<tr>
<th>Description</th>
<th>Classification Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical paint or ink removers</td>
<td>C09D 9/00</td>
</tr>
<tr>
<td>Cleaning or degreasing metallic material by chemical methods other than electrolysis in the industry</td>
<td>C23G</td>
</tr>
<tr>
<td>Bleaching or washing of fibres, raw textiles (in the textile industry); dry cleaning of fibres, fabrics</td>
<td>D06L</td>
</tr>
<tr>
<td>Treating fibres or fabrics with chemicals</td>
<td>D06M</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Description</th>
<th>Classification Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparations specially adapted for washing the hair, cleaning the teeth or mouth, cleansing the body (e.g. shower preparation)</td>
<td>A61K 8/00, A61Q 5/00, A61Q 19/00</td>
</tr>
<tr>
<td>Special washing compositions for cleaning semi-permeable membranes</td>
<td>B01D 65/06</td>
</tr>
</tbody>
</table>

Informative references

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Classification Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disinfectants as such</td>
<td>A01N</td>
</tr>
<tr>
<td>Methods or apparatus for disinfection or sterilisation</td>
<td>A61L</td>
</tr>
<tr>
<td>Use of substances as emulsifying, wetting, dispersing or foam-producing agents</td>
<td>B01F 17/00</td>
</tr>
<tr>
<td>Refining glycerol</td>
<td>C07C 31/22</td>
</tr>
<tr>
<td>Polishing compositions</td>
<td>C09G</td>
</tr>
<tr>
<td>Method of cleaning</td>
<td>Classifications</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Stripping of photoresist material</td>
<td>G03F 7/42</td>
</tr>
<tr>
<td>Chemical treatment or cleaning of semiconductor</td>
<td>H01L 21/306, H01L 21/02041</td>
</tr>
<tr>
<td>Cleaning or polishing of printed circuits</td>
<td>H05K 3/26</td>
</tr>
<tr>
<td>Microcapsules</td>
<td>B01J 13/02</td>
</tr>
<tr>
<td>Enzymes</td>
<td>C12N</td>
</tr>
<tr>
<td>Organic compounds</td>
<td>C07</td>
</tr>
<tr>
<td>Polymers</td>
<td>C08</td>
</tr>
<tr>
<td>Anti foam compositions</td>
<td>B01D 19/04</td>
</tr>
<tr>
<td>Devices for adding washing or cleaning ingredients into the washing or dishwashing machine</td>
<td>D06F 39/02, A47L 15/4409</td>
</tr>
<tr>
<td>Cloth, pads, sponges containing cleaning ingredients</td>
<td>A47L 13/17, A47L 1/15</td>
</tr>
</tbody>
</table>

**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.

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.


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:

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphoteric surfactant</td>
<td>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.</td>
</tr>
<tr>
<td>Anionic surfactant</td>
<td>Anionic surfactants have a negatively-charged surface-active ion. An example is sodium alkylbenzene sulfonate.</td>
</tr>
<tr>
<td>Cationic surfactant</td>
<td>Cationic surfactants may have a positively-charged cation; typical are the quaternary ammonium salts; they may also be amides or amines.</td>
</tr>
<tr>
<td>Compounding ingredients</td>
<td>The non-surface-active ingredients in a detergent composition, e.g. builder, water-softening agents, solvent.</td>
</tr>
<tr>
<td>Detergents</td>
<td>Detergents are basically any cleaning materials. Such materials may or may not contain surfactants. The term &quot;synthetic detergent&quot; is also used as a synonym for &quot;surfactant&quot; (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).</td>
</tr>
<tr>
<td>Nonionic surfactant</td>
<td>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.</td>
</tr>
<tr>
<td>Resin soap</td>
<td>A yellow soap containing resin, used</td>
</tr>
</tbody>
</table>
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

Superfatting 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 |

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 |

**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 |

**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:*

10
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 17/003 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:

<table>
<thead>
<tr>
<th>Soaps</th>
<th>C11D 9/00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaping soap</td>
<td>C11D 13/00</td>
</tr>
</tbody>
</table>

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 |