

## Factsheet Surfactant vs Detergents

### What is a surfactant?

A surfactant is a special type of chemical that can help mix substances that usually don't blend well, like oil and water. It has two parts: one that repels water (lipophilic) and one that attracts water (hydrophilic). This unique structure allows surfactants to reduce the surface tension of liquids, enabling them to spread better and wet surfaces more effectively, or to act as defoaming agents or emulsifiers.

Surfactants are versatile and can be produced from natural or synthetic materials. They play a crucial role in many industries, including cleaning products, cosmetics, pharmaceuticals, and numerous processing applications.

### What are their uses?

**In Detergents:** Surfactants are key ingredients in various cleaning products, such as laundry detergents, dish soaps, and surface cleaners. They help remove dirt, grease, and stains by breaking down the surface tension between water and these substances, allowing them to mix and wash away easily. Whether doing laundry, or cleaning dishes, surfactants make these tasks more efficient.

**In other industries:** The properties of surfactants extend beyond cleaning products. They are also used in various other end products (e.g. cosmetics, pharmaceuticals, agriculture) and processing applications (e.g. textiles, pulp and paper). Their ability to mix and disperse ingredients is invaluable across many sectors. For further information on surfactant applications, please visit [CESIO Applications](#).

### What is the difference between a surfactant and a detergent?

While all detergents contain surfactants, they are not the same. Detergents are complex mixtures that include various ingredients designed to clean effectively. A single surfactant alone is usually not enough for effective cleaning. Detergent formulations often combine multiple types of surfactants and additional components, such as enzymes and agents that prevent colors from bleeding, to enhance cleaning performance.

In simple terms, surfactants are one component of detergents, i.e., of products tailored for household and professional cleaning tasks. Detergents target consumers (B2C), professionals, and industrial uses, while surfactants are used in industrial environments (B2B) to formulate detergents.



## How are surfactants regulated?

Surfactants are chemical ingredients found in a wide variety of products and are regulated under EU horizontal legislation for chemicals, such as EU REACH and CLP. Depending on how a surfactant is used, additional industry-specific regulations may also apply. For instance, when surfactants are used in detergents, EU detergents legislation specifically addresses their biodegradability. As a result, all surfactants used in detergents within the EU must meet strict standards for biodegradability.

## Conclusions

- **Surfactants are not detergents:** They are essential ingredients within detergents.
- **Detergents are complex mixtures:** They usually contain multiple surfactants and additives for effective cleaning.
- **Different uses:** Surfactants are mainly used in industrial environments (B2B) to formulate detergents that are often consumer-focused (B2C). Surfactants are further up the supply chain than detergents.