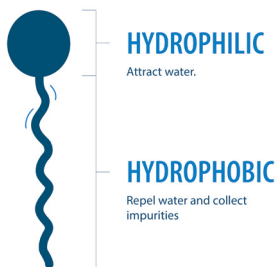


Understanding Chemistry to Select the Proper Cleaner

Defining Efficient Cleaning

Efficiencies in cleaning activities are achieved through scientifically formulated detergents compounded with water. These detergents rely on the multifunctionality of surfactant molecules, which are amphiphilic in nature—possessing both hydrophilic (water-attracting) heads, which may be polar or charged, and hydrophobic (water-repelling) tails that amass non-polar contaminants. Surfactants can be categorized into four different types based on their ionic charge characteristics and cleaning properties:

- Non-ionic surfactants exhibit neutrality, low foaming tendencies, and are adept at emulsifying and eliminating organic contaminants.
- Anionic surfactants display a negatively charged head, possess robust foaming capabilities, and are versatile in soil type management.
- Cationic surfactants have a positively charged head, and they often fulfill roles in antistatic applications.
- Amphoteric surfactants, possessing dual charge potential, are adaptive molecules that can behave as cationic or anionic agents contingent on the pH environment.



These surfactants are vital for reducing surface tension and improving product penetration. Given the significant soil levels encountered in the animal health industry, detergents with superior penetration capabilities are essential for efficiently lifting and removing stubborn debris. This efficiency results in substantial savings in time, energy, labor, and water usage.

Depending on the type of surfactants, detergents will have a faster micelle creation and foam capacity. These factors along with the pH value, significantly influence the mechanism of performance in a specific manner.

The general composition of a detergent will vary depending on manufacturer objectives; however, all detergents will present:

- Water
- Surfactants in a general range from 5 to 15% depending on the focus application.
- pH regulators depending as well on the type of detergent in a general range from 0.5 to 15%.
- Chelating agents in a range from 0 to 1%.
- And colorant agents and perfume in a range from 0 to 1%.

This variability in detergent composition is influenced by the expertise of the manufacturer, resulting in the creation of specialized formulas for specific uses.

At CID LINES, an Ecolab Company, we have dedicated time and knowledge to develop Kenosan, a highly effective alkaline detergent tailored to tackle the robust challenges of cleaning animal manure.

With a pH value over 12 in a 1% dilution and a complex combination of non-ionic, anionic and amphoteric surfactants, solvent and chelating agents, Kenosan is capable of removing more than 90% of soil from any surface.

Its unique blend of surfactants provides a sticky, long-lasting foaming effect that enhances contact time and allows for easy removal after action. The advanced chemistry of Kenosan makes it an ideal choice for cleaning procedures in the animal industry.

