

## **WHY THE DETERGENTS REGULATION CONTAINS A DEROGATION PROVISION**

The new draft Detergents Regulation has a very wide scope; covering the complete range of products used in water-based washing processes. We are all familiar with fabric- and dish-washing detergent products used at home. Similar products are used in the institutional cleaning sector; for example in laundries, hospitals, hotels and restaurants. These detergents typically contain highly biodegradable surfactants, which would comply with the requirements of the draft Regulation, and contain around 97% of all detergent surfactants used in the European market.

There are, however, certain water-based washing processes used in industry where very different and very demanding cleaning requirements have to be met. Relevant Industry sectors include food and beverage manufacture, where hygiene is a vital consideration, and metal degreasing where aqueous-based washing systems have been introduced to replace solvent-based systems with associated VOC concerns.

Consider, for example, the dairy industry. Here, milk storage vessels, evaporators, heat exchangers, bottling machines, pumps and pipelines have to be kept clean and sterile to prevent product contamination and danger to public health. It is impossible to access most of the equipment and cleaning is typically carried out by circulating highly alkaline aqueous detergent solutions through the equipment. These react chemically with the fatty residues to form soluble soaps; which are washed away to drain. The use of detergent surfactants is essential to provide good wetting of the greasy surfaces by the cleaning solution and to control/suppress the foam which would be generated by the soaps formed in the cleaning process. To withstand the high alkalinity and harsh conditions of the cleaning process, the surfactants must have very special and highly stable chemical structures.

It would not be surprising, therefore, if some of these special surfactants are slow to biodegrade and may not achieve the threshold pass level specified in the Regulation. At the same time, their continued use may be essential for socio/economic reasons. To cater for this situation, the draft Regulation provides a framework for allowing derogations in exceptional cases. These derogations may be granted on a case-by-case basis subject to expert evaluation of the balance between the benefits of continued use and any potential environmental risk. Any derogated products must, of course, meet the existing requirements for Primary Biodegradability so that the current level of environmental safety will not be compromised.

It is believed that fewer than 3% by volume of all surfactants used in detergents may need to be considered for a derogation. Many different individual surfactant products are, however, used in the industrial sector; often in small volumes and sometimes manufactured specially to satisfy particular performance requirements. This sector of the detergent market is highly specialised and is serviced by a number of small/medium enterprises.