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3.2.3 Adsorption at the solid-liquid interface 3.2.4 Surface tension and wetting; 3.2.5 Interplay of surfactants with other detergent ingredients; 3.3 Phase behaviour of surfactants; 3.3.1 Introduction; 3.3.2 Surfactant phases; 3.3.3 Impact of the phase behaviour on detergency; 3.4 Emulsions; 3.4.1 Introduction; 3.4.2 Emulsion types; 3.4.3 Breakdown of emulsions; 3.5 Foaming and defoaming; 3.5.1 Introduction; 3.5.2 Stabilising effects in foams; 3.5.3 Correlation of foamability with interfacial parameters; 3.5.4 Foam control; 3.6 Rheology of surfactant solutions; 3.6.1 Introduction 3.6.2 Rheological terms 3.6.3 Rheological behaviour of monomeric solutions and non-interacting micelles; 3.6.4 Entanglement networks of rod-like micelles; 3.6.5 The rheological behaviour of bilayer phases; References; 4 Anionic Surfactants; 4.1 Sulphonates; 4.1.1 Alkylbenzene sulphonates; 4.1.2 α -Olefin sulphonates; 4.1.3 Paraffin sulphonates; 4.1.4 Sulphonated methyl esters; 4.1.5 Sulphonated fatty acids; 4.1.6 Sulphosuccinates; 4.2 Sulphates; 4.2.1 Alkyl sulphates; 4.2.2 Alkyl ether sulphates; 4.3 Phosphate esters; 4.4 Carboxylates; 4.4.1 Soap; 4.4.2 Ether carboxylates 4.4.3 Acyl sarcosinates 4.4.4 Alkyl phthalamates; 4.4.5 Isethionates; 4.4.6 Taurates; References; 5 Non-ionic Surfactants; 5.1 Introduction; 5.2 General alkoxylation reactions; 5.3 Alkyl phenol ethoxylates; 5.4 Fatty alcohol ethoxylates; 5.5 Polyoxethylene esters of fatty acids; 5.6 Methyl ester ethoxylates; 5.7 Polyalkylene oxide block co-polymers; 5.8 Amine ethoxylates; 5.9 Fatty alkanolamides; 5.10 Amine oxides; 5.11 Esters of polyhydric alcohols and fatty acids; 5.12 Glycol esters; 5.13 Glycerol esters; 5.14 Polyglycerol esters; 5.15 Anhydrohexitol esters 5.16 Polyoxyalkylene polyol esters

Sommario/riassunto

Surfactants are used throughout industry as components in a huge range of formulated products or as effect chemicals in the production or processing of other materials. A detailed understanding of the basis of their activity is required by all those who use surfactants, yet the new graduate or postgraduate chemist or chemical engineer will generally have little or no experience of how and why surfactants work. Chemistry & Technology of Surfactants is aimed at new graduate or postgraduate level chemists and chemical engineers at the beginning their industrial careers and those in I
