

Part II

## **The Role of Surfactants**

A surfactant is a surface active agent that modifies the properties of fluid/fluid interfaces. Most commonly they reduce the interfacial tension, which is also known as the surface tension. Surfactants are used as detergents, wetting agents, penetrants, and as stabilizers of suspensions. The oil droplets in emulsion layers in a film are in motion both during manufacturing and to some extent also after the film has been made. As a result, droplets collide with each other and coalesce. In order to maintain a desired, stable particle size distribution of oil droplets, a surfactant is used to slow down the coalescence; this will be the topic of Chap. 8. In Chap. 9 we discuss the question of how surfactants are used to measure coalescence of oil droplets during the manufacturing of a film.