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# The Complete Book on Emulsifiers with Uses, Formulae and Processes (2nd Revised Edition)

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## About the Book

Emulsifier is an organic compound that encompasses in the same molecule two dissimilar structural groups e.g. water soluble and a water insoluble moiety. It is the ingredient which binds the water and oil in a cream or lotion together permanently. The composition, solubility properties, location and relative sizes of these dissimilar groups in relation to the overall molecular configuration determine the surface activity of a compound. Emulsifiers are classified on the basis of their hydrophilic or solubilizing groups in to four categories anionic, non ionic, cationics and amphoterics. Emulsifier is utilized in various industries; agriculture, building and construction, elastomers & plastics, food & beverages, industrial cleaning, leather, metals, paper, textiles paints & protective coatings etc. An emulsion is an ideal formulation for the administration. The emulsion form allows uniform application of a small amount of active ingredient on the surface of the skin. Some of the important emulsions in different field are pharmaceutical emulsions, rosin & rubber emulsion, textile emulsions, pesticide emulsions, food emulsions, emulsion in paint industry, emulsion in polish industry, leather & paper treatment emulsions etc. Various cosmetics creams, such as moisturizers, contain emulsifiers. Lighter, less greasy feeling creams are oil in water emulsions; heavier creams used to treat rough skin are water in oil emulsions, with oil as the main ingredient. Liquid soaps, toothpastes and other body care products also contain emulsifiers. Emulsifiers have the ability to optimize the concentration of certain nutrients in an emulsion. For example, in hair conditioners, some conditioning agents can damage hair if not properly diluted in the solution. Emulsifiers are among the most frequently used types of food additives. Emulsifiers can help to make a food appealing. Emulsifiers have a big effect on the structure and texture of many foods. Increasing demand for low fat food among health conscious consumers is gradually driving the market for emulsifiers. Besides stabilizing emulsions, emulsifiers derived from non hydrogenated fats help in maintaining sensory characteristics of food such as texture, flavor, and taste that are often lost due to fat reduction. This characteristic of making healthier products similar in taste to fat containing versions has enabled emulsifiers in gaining widespread acceptance in the market. The global food industry is also witnessing increase in demand for multipurpose emulsifiers that perform functions of both stabilization and emulsification. Some of the fundamentals of the book are characteristics and application of emulsifiers, wetting and detergent structures in emulsifier, effect of surfactant on the properties of solutions, wetting characteristics of emulsifiers, formulated emulsifiers, non surfactant functional additives, inert fillers, functional surfactant additives, uses of emulsifiers, household and personal products, industrial uses of emulsifier, anionic surfactants, non ionic surfactants, cationic, amphoteric and enzyme, alkylolamides, vinylarene polymers, alkyl sulfates, ethoxylation processes,

application of emulsifiers, etc. The present book contains manufacturing processes of various types of emulsifiers which have applications in different industries, along with photographs of machinery and equipments. This is a resourceful book for scientists, technologists, entrepreneurs and ingredients suppliers.

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