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Subject: **WAX and PARAFFIN EMULSIONS**  
**high pressure homogenisation**

The wax emulsion is a dispersion of solid wax particles in a continuous phase of water. The wax is in a molten form as the emulsion is formed. A wax emulsion consists in wax, surfactants and water. Other ingredients may be added as preservatives or to help stabilize the dispersion. Wax emulsions are used in the manufacture of paper, paperboard and boxboard. It is also used in the production of insulating board, hardboard and particleboard in the building products industry.

**Typical composition**

Different types of waxes are basically for wax emulsions preparation: Paraffin Wax, Microcrystalline Wax, Semimicrocrystalline Wax.

The wax emulsion is characterized by small and particle size with a good mechanical stability and long-term shelf life. Moreover the emulsion can be formulated in order to be acid stable or alkaline stable in relation with the components added and to the final application of the product. A very general composition is water, wax and emulsifier, quantities components and type of emulsifiers are different according to the producers specification and the use of the emulsion.

Wax emulsions usually are prepared with percent of wax equal to or less than 50%, because exceeding that amount of wax will greatly increase the viscosity of the emulsion from a free-flowing emulsion to a thick, slow-flowing emulsion.

The preparation of the emulsion depends on the type of emulsion and on the type of production plant available.

