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VISCOMETRIC STUDIES ON NATURAL RUBBER LATEX VULCANIZATION

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ABSTRACT

The vulcanization is the most popular and widely used technology that is available for the manufacture of natural rubber latex based product. In order to increase the vulcanizing rate and cross-linking efficiency vulcanization activators (eg. ZnO) and vulcanization accelerators (eg. ZDC) must be added. At the same time viscosity is a very important property of the latex.

Therefore in this research, an attempt has been made to study the viscosity changes of natural rubber latex with the activators, accelerators and the temperature during the vulcanization.

Different amount of activators and accelerators were used for the selected formula for the natural rubber latex at two different temperatures. 30°C was selected which was the average room temperature, and 80°C was selected as a high temperature.

After comparing viscosity of many samples in two different temperatures, results clearly show that vulcanization influence the viscosity of the latex. Temperature also affects the influence of the vulcanization process in the viscosity of the latex.

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