

## **Effect of Carboxy Methyl Cellulose on Viscosity of NBR**

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Organic Sodium Carboxy Methyl Cellulose (CMC) is a water-soluble cellulose ether and macro molecule electrolyte. CMC is versatile in its ability to control rheology and viscosity of aqueous systems. CMC also has micro foam effect and it gives the deer skin property and smoothness to the glove surface. Therefore, the aim of this study is to examine the effect of CMC on viscosity of NBR. Solidified CMC samples were used in the experiment. CMC were mixed with cure pack. In the mixture, 65% of mixture was CMC and 23% of the mixture was cure pack. The remaining 12% was water. The mixture was added to the nitrile compounds which were prepared according to the same formulation by using different treatments such as T0-control treatment with no mixture, T1-115 g of mixture, T2-86.25 g of mixture, T3-57.5 g of mixture, T4-28.75 g of mixture. Each treatment was replicated three times. After 8 hours mixing time the viscosity of the compound was measured once in each 2 hours for 7 days. Viscosity was measured using RV viscometer using spindle 3 at 20 rpm. The total solid content of the all samples were adjusted after 12 hrs. The results of the study revealed that, the standard viscosity was given within 6 hours and there was a gradual increment of viscosity with the time initially and then the viscosity was stable. The tested treatments showed different stabilizing times and decreasing viscosities with the time. Further, in the control treatment, there was only a viscosity increment and there was no plateau development. Therefore, the viscosity of the compound has been affected and the mixing time could be decreased with the addition of CMC which will be more effective in rubber industry.

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