

INVESTIGATION OF RHEOLOGICAL PROPERTIES OF THE IRRADIATED ISOPRENE-NITRILE ELASTOMERS

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In rheology of polymers the methodology of viscous flow of diluted polymers has been sufficiently elaborated. The complexity of the polymers' flow process creates a problem in development of flow theory of these materials. Notions about these processes are clear. However, data about viscous flow process for elastomeric materials is not entire yet.

The aim of this work was the investigation of flow regularities both rubbers and the irradiated blends on the basis of these rubbers in dependence of following factors: different tensions and deformation shift rate, irradiation and low-molecular product degree. The flow regularities of irradiated blends with flow of non-irradiated blends were correlated.

As a result of the investigation was investigated that the deformation shift rate in irradiated rubbers an abnormal effect in binary blends on the basis of isoprene nitrile rubber is accompanied in the shape of the decrease of shift tension after progress in some critical tensions P_k .

During investigation of the influence of second component on viscosity of INE during testing them at irradiation regime (10-20 kGr) the flow is equal 1 sec^{-1} . In accordance with conducted work the relation was established between rheological properties and behavior of elastomeric blends on the basis of INE in their formation process.