

Thematic direction: Research of influence of technological additives on properties of rubbers on the basis of BNR new generation. Part 1.

Vuhtazine RV/g-s

© Nikolay I. Koltsov,^{1*} Nikolay F. Ushmarin,² Alexander E. Petrov,¹ Nadezhda P. Petrov,¹
Nina N. Petrov,² and Sergey M. Verhunov¹

¹ Department of physical chemistry and macromolecular compounds. Chuvash state university of I.N. Ulyanov. Moscow avenue, 15. Cheboksary, 428015. Chuvash Republic. Russia.

Phone: +7 (8352) 45-24-68. E-mail: koltsovni@mail.ru

² Technical department to rubber-technical products of Cheboksary production association of V.I. Chapaeva. Socialist St., 1. Cheboksary, 428006. Chuvash Republic. Russia. Phone: +7 (8352) 39-62-39.

*Supervising author; ⁺Corresponding author

Keywords: *butadien-nitrile rubbers of new generation, plastication, technological additives, vuhtazine RV/g-s, viscosity, a molecular-mass distribution, rubbers, plasto-elastic properties, physical-mechanical properties.*

Abstract

Comparison of properties of butadien-nitrile rubbers (BNR) of new and old generations was carried out. Distinction of their viscosity and the viscosity prior to the beginning of semi-vulcanization of rubber mixtures on the basis of these rubbers has been defined. On resistance to the influence of severe atmospheres and heat the rubbers on the basis of new generation BNR than rubbers on the basis of old generation BNR are characterized by the worst properties. For distinction elimination in properties of BNR and rubber mixtures on their basis the technology of stabilization of viscosity of the new generation BNR with the use of vuhtazine RV/g-s at the stage of their plasticization has been developed. Application of vuhtazine RV/g-s allowed to reduce duration of rubber plasticization processes and their mixture with ingredients when manufacturing rubber mixtures on rollers as well as to stabilize the elastic-hardness properties and stability of rubbers under the influence of severe atmospheres.