

## Studying the process of foaming of epoxy resin in the presence of new polyaminoalkylphenols acting as a blowing agent and hardener

© **Ksenia A. Medvedeva**,<sup>†</sup> **Dmitry G. Miloslavsky**<sup>†</sup> **Elena N. Cherezova**,\* and **Elena M. Gotlib**\*

*Department of Synthetic Rubber Technology. Institute of Polymers. Kazan National Research Technological University. Karl Marx St., 72. Kazan, 420015. Tatarstan Republic. Russia.*

*Phone: +7 (843) 231-42-14. E-mail: ksmmedvedeva@rambler.ru*

\*Supervising author; <sup>†</sup>Corresponding author

**Keywords:** epoxy foam, polyaminoalkylphenols, blowing agent, surface active agents.

### Abstract

Process of foaming of epoxy resin ED-20 in the presence of new polyaminoalkylphenol (PAPh) received by interaction of phenol (Ph), an ethylenebisamin (EBA) and a paraformaldehyde (P) at a different order of input of ingredients and their ratio is studied. It is shown that the technology of its preparation, namely an order of input of reagents has impact on efficiency of PAPh as a blowing agent. For further development of work it is offered to use PAPh-1 received at 45 °C by option 1 and the ratio Ph:P:EBA = 1:2:2.