Now more attention has been given to the obtaining of polymeric materials with the low combustibility.

For obtaining the flame-retardant polymeric materials, which also have high heat resistance and improved elasticity, we have elaborated a method of obtaining of chlorine-containing aliphatic epoxide on the basis of propanetriol.

Chlorine-containing epoxide resins were obtained by the two-stage method. At the first stage propanetriol is condensed with 3-chloro-1,2-epoxypropane in the presence of the boron fluoride etherate with obtaining of chlorohydrin ether. At the second stage the obtained intermediate chlorohydrin ether is transferred by means of alkaline treatment to the corresponding chlorine-containing triglycidyl ether.

The prepared epoxide resin is easily combined with other epoxides and hardened in presence of the amine and anhydride types of hardener. It has been shown that introduction of the prepared trifunctional chlorine-containing epoxide resin in structure of the epoxydiane resin ED-20 in the ratio 30-60:70-40 mass h. respectively leads to increase of the durable parameters and gives to compositions the self-extinction.

References