

## **SYNTHESIS OF COLD CURING ADHESIVES BASED ON CHLOROPRENE RUBBER**

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Currently it is difficult to imagine engineering and instrumentation, furniture and shoe industries, construction, aircraft construction, space and military equipment, shipbuilding without adhesives. Development of adhesives is one of the most traditional areas of the use of polymer. The purpose of research is a creation of new formulations of cold-curing adhesives based on chloroprene rubber Skaypren G-40T with a set of adhesion, strength, performance properties that meet the requirements of modern technology. To achieve the goal the formulations of adhesives based on cold curing chloroprene rubber were developed. These adhesives were tested for compliance with technical requirements.

Creation of adhesive formulation was based on finding the optimal balance between the physical and mechanical properties providing the set requirements, the technological properties which satisfy the conditions of the existing production process and economic efficiency. Rubber Skaypren G-40T is characterized by a higher viscosity, so it was used for the preparation of novel cold-cure adhesive instead of previously used chloroprene rubber Nairit. We developed six recipes of adhesives. According to these recipes prototypes cold curing adhesives were prepared in the laboratory. The developed formulations contain rubber, different vulcanizing agents, solvents, and builders. Data of research show that the adhesives containing Ribetac 7522E resin (formulations 1,2,3) exhibit greater strength in comparison with adhesives which have 101 K resin I their composition (formulations 4,5,6).

Thus we can conclude that the formation of a durable adhesive bond is significantly affected by the preliminary formation of chelate resins with magnesium oxide, applied mark resins (since the resin provides adhesion strength of the adhesive composition), the use of cross-linkers and accelerators of vulcanization.

However the use of hardeners in adhesive formulations significantly reduces their viability, as well as an inconvenience in use, as it requires pre-mixing before gluing.

Improving the technological properties of adhesives with promoting additives that can be incorporated directly in the manufacture of adhesives is an urgent problem that requires further study.