

176 Synthetic adhesive based on copolymer system

A number of commercial adhesives are used in leather industry. These are either aqueous or solvent based and are prone to losses due to evaporation, fungal attack and fire hazards. They also contain quite good amount of the medium (water/solvent) which means additional cost as transport. An attempt is made to prepare an adhesive that would prove quite suitable for the leather footwear and leathergoods industries. The developed product is resistant to mould growth and fire, less prone to losses due to evaporation and can be easily transported and thinned down with suitable solvent, just prior to use.

Equimolar concentrations of acrylic monomers were copolymerised under

suitable conditions using redox catalyst. The copolymer formed was colourless with rubber-like consistency. This is further treated with a suitable solvent to get a syrupy liquid having the adhesive characteristics.

In order to test its adhesive property, the product was tested using full chrome/chrome retanned upper leathers and vegetable tanned sole leather. Control experiments were also conducted using commercial adhesive. The results of peeling load strength of the controls are found to be quite comparable with the experimental adhesive. Further work on the polymer formulations and conditions is in progress.

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