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SYNTHESIS OF RIGID POLYURETHANE AND EFFECT OF SILICON SURFACTANT ON ITS PROPERTIES

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Rigid polyurethane foam has been synthesized from high functional crude MDI and blending poly-I for a wide range of surfactant concentration with R141b blowing agent. Cream time, gel time and take free time increase as the concentration of surfactant is increases. The foam density decrease as the concentration of surfactant is increases the decrease in density due to the increase blowing efficiency with surfactant. Surface tension also rapidly decreases in accordance with cell size decrease and close cell content rapidly increase at low surfactant concentration. The decrease of cell size was accompanied by the decrease of thermal conductivity. Today, numerous building blocks and polymer structures are available to chemists and engineers for the synthesis of polyurethanes by the poly-addition principle. Because the manufacturer of polyurethane articles converts low-molecular weight raw materials into finished polymers at the production site, author have place special emphasis on the brief history and some basic concepts about the raw materials and chemistry of polyurethane. He also covers the manufacturing techniques and processing equipment's in this research article, reviews physical, chemical, mechanical and electrical properties and also cover the applications of all types of polyurethanes for a wide range of industries.

BIOGRAPHY

M Shafiq Randhawa has completed his PhD course work from University of the Punjab, Pakistan in Polymer Technology and Engineering. He is the General Manger of Relaxo Pvt. Limited (Chawla group of Industries).

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