

عنوان مقاله:

Study of porosity in rigid polyurethane foams by different blowing agent

محل انتشار:

سومین کنفرانس بین المللی پژوهش در مهندسی، علوم و تکنولوژی (سال: 1395)

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خلاصه مقاله:

Rigid polyurethane (RPU) foam is one of the most widely used insulation. Due their excellent insulation and mechanical properties they are widely used in construction, automotive, freeze industry and nautical applications. Foam properties such as porosity and density can be adjusted by different blowing agent. The most common blowing agents were used in industry are HCFC 141b and HFC 365mfc but in this study we used acetone, ethanol and water as a blowing agents. They are ease of use and available. Also the effect of different loading mass fraction of blowing agent and changing kinds of blowing agents on porosity of RPU was studied. Results shown that the characteristic times of samples are lower than times of HCFC 141b and HFC 365mfc blown polyurethane. The other result is water-blown PU has the largest cell size and also the highest density than the other ones. Results show that the best load mass fraction of blowing agent is 5%wt.

کلمات کلیدی:

Sugarcane-fiber, Porosity, Blowing agent, Polyurethane foam

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