Comfort properties of EPS filled PU foams

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Polyurethane(PU) foams are widely used for sound absorption and seat cushioning materials in automobiles. The physical properties (comfort and acoustic properties) of PU foams can be enhanced by adding various fillers to the base formulations. In this study, physical properties of PU foams were investigated by varying expanded polystyrene(EPS) beads contents. EPS beads rarely modified the morphology (pore size, cavity size, pore ratio, and open porosity) of PU foams, but as EPS beads are added, the value of sag factor and hysteresis loss are enhanced. Especially, the maximum of stress value increased because EPS supports the PU foams.