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Mechanical Properties of Co-Injection Molded PPS

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Interrelation between structure and mechanical properties of sandwich injection molded poly(phenylene sulfide) (PPS) with its glass-fiber reinforced material (GFPPS) as the core was investigated. The strength and the modulus of the sandwiched molding in flexural testing were between those of neat PPS and neat GFPPS, respectively. These values are considered to be increased when the core expands enough to form the sub-skin layer in which the glass fibers are oriented along the flow direction. In addition, the strain energy of the sandwiched molding was found to be higher than that of neat GFPPS.