# Study on effect of processing conditions on shrinkage in Injection moulding.

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# ABSTRACT


**STUDY ON EFFECT OF A PROCESSING CONDITIONS ON SHRINKAGE IN INJECTION MOULDING.**



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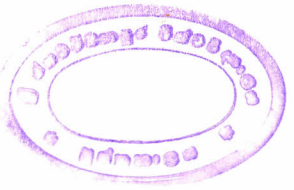
Nowadays commodities of thermoplastics are often produced to tight dimensional standards to facilitate assembly with other components used in electrical, electronic and mechanical applications such as sockets and adapters. In Sri Lanka variety and quantity of plastic parts are produced and used for several applications.

A systematic study on the effect of processing conditions on mould shrinkage was undertaken for some semi crystalline and crystalline plastic materials such as Poly Properlene (PP), Polyamide (Nylon 6 or PA6), PolyOxymethalene (POM), Poly Butalene terepthalate (PBT) and PBT with Glass fibre 20% (PBT GF20).

According to this study, it was found that holding pressure and holding time were the most effective parameters. The effect of the melt temperature and mould temperature exhibits less important. Injection pressure shows linear effect on shrinkage and cooling time and Injection speed has small effect on part shrinkage.



Glass Fiber filled PBT resin shows anisotropic behaviour. In-flow shrinkage is very less and cross-flow shrinkage is very much closer to that of unfilled material. Only the orientation of fiber reduces the shrinkage.

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