Abstract

Ultra high speed injection molding plays a more significant role in molding thin-wall part in recent 3C products. Systematic studies on the proper molding window of Secure Digital (SD) card housing of 0.25 mm thick using ultra high speed injection molding have not yet been reported. In this study, a proper molding window for SD card housing using ABS and HDPE by varying mold temperatures from 30 °C to 100 °C and injection speeds from 100 mm/sec to 1200 mm/sec was investigated in details. Molded dimension and weight were measured experimentally. It was found that higher mold temperature and faster injection speed are two critical molding parameters that leading to good moldability for SD card housing.

Keywords: Ultra High Speed Injection Molding, Thin-wall, SD card, Shear Thinning and Molecular Orientation