

# Potential of Conformal Cooling Channels in Rapid Heat Cycle Molding: A Review

## **Abstract**

Rapid heat cycle molding (RHCM) can eliminate the weld line, increase flow length, and improve surface quality of the molded parts. However, the cycle time is much longer as compared to the conventional injection-molding process due to the time taken to heat up and cool down the mold. This paper reviews the applications of conformal cooling channels to reduce the cycle time in rapid and hard tooling for the conventional injection-molding process. The performance of conformal cooling channels in reducing the cycle time has been proven; however, the full potential of conformal cooling channels in RHCM is yet to be explored.

Keywords; Conformal Cooling Channels, Injection Molding, Plastics, Processing, Rapid Heat Cycle Molding