Micro Molding Design Guidelines

These micro molding guidelines reflect some of the capabilities we've been asked to produce and are to give a general idea of what can be accomplished. Each project is unique in size, shape and material and any one of those can greatly affect the molding capabilities. In some cases it can even exceed the general guide.

See how you can challenge us!

Micro Molding Guidelines

Micro-Mold® Platform

– Parts up to 1/2" (13mm) in the largest dimension
– Our smallest part to date is roughly 800µm (0.031") x 300µm (0.012") x 380µm (0.015")
– Thin wall section near .004" (.1mm)
– Feature aspect ratios around 6:1
– Part volume .005 in3 (.08 cm3) or less
– Gate size as small as Ø .004" (Ø.1mm)
– Ejector pins as small as Ø .010" (Ø .254mm)
– Parts must have a gate and ejection location consideration
– Material selection can greatly affect the fill and definition of features

Micro Mold Examples >

Small Mold Platform

– Parts up to 9 in2 (58cm2)
– Our largest part to date is roughly 3.5" (9cm) in diameter or about 1oz in shot weight.
– Many of the same Micro-Mold® type features can be achieved
– Material selection on larger parts with finer details is more critical

Small Mold Examples >

Insert / Leadframe Platform

– Parts up to 9 in2 (58cm2)
– Overmold metals, glass, foil, fabric, ceramic flex-circuits, film, other plastics
– Insert material can be as thin as .004"
– Must consider how insert will be held in mold during the process
– Insert material must be able to withstand the pressures and temperatures of molding

Lead Frame / Insert Examples >

Common Thermoplastics

– PEEK, Ultem®, LCP, Nylon
– TPE / TPU
– Filled materials: glass, carbon, etc.
– Optical Grade
– Medical Grade
– Attenuated Material