PDF: Metal Injection Moulding (MIM) Process

THE MIM PROCESS

Metal Injection Moulding

Feedstock

Metal powder of fine particle size is mixed with thermoplastic polymer to form a mixture of ingredients known as feedstock. The feedstock made into pellets and fed into the moulding machine.

Green part

The feedstock is heated to melt the plastic and molded to the desired shape. The moulded parts is known as green part.

Brown part

The binder is removed thermally by heating to around 400 degree centigrade from the green part ,by a debinding process. The debound parts called as brown parts and is brittle and porous.

Sintered part

The brown parts is heated to more than 1200 degree centigrade ,in the finale sintering process allowing the part into a dense solid with the elimination of pores. The sintered density is similar to a casting at about 98% of theoretical.

Mixing

Injection

Debinding

Sintering