



The Chemical Company

Product Information

Catamold®

Powder Metal and Ceramic Injection Molding

Fabrication of complex ceramic and metal parts to near net shape

Features

- Excellent mechanical properties
- Economical: Near net shape fabrication, high material utilization
- High parts complexity is attainable
- Multiple parts can be reduced to one

Catamold powder injection molding is the leading ready-to-use feedstock for metal and ceramic injection molding. Our comprehensive product line consists of metal and ceramic powders compounded with tailor-made binding agents. Catamold powder injection molding enables the economic production of geometrically sophisticated metallic components.

Three of the key features of Catamold are:

Functional integration

Catamold powder injection molding gives designers and users maximum freedom in terms of component design. Instead of achieving functions by joining several parts together, with injection molding, the functions integration is achieved with a single part.

Outstanding properties

Because the Catamold powder injection molding process uses micron-size powder, it is possible to achieve a final density of 96%–100% depending on the alloy and component design. This high density, combined with the homogeneous material structure across the cross-section of the component, yields superior mechanical and magnetic properties and excellent corrosion resistance. In many cases, the surface quality of components made with Catamold is such that no finishing is required.

Broad range of materials

Catamold powder injection molding consists of a wide range of alloys available around the globe. Our product range comprises typical material groups including low-alloy and stainless steels, tool steels, superalloys and oxide ceramics.



Catamold powder injection molding in aerospace applications

- Catamold powder injection molding enables the economic production of complex components up to 200 grams
- Catamold powder injection molding expands component design freedom far beyond what is feasible through machining
- Metal Injection Molding is a recognized green technology with material utilization rates greater than 95% (compared to machining at 40–50% and casting at 90%) and the lowest energy consumption per finished lb of any competing technology
- Catamold powder injection molding offers the ability to produce components in difficult to machine alloys
- The mechanical properties of Catamold powder injection molding meet and often exceed that of investment casting
- Catamold powder injection molding is available in a wide range of materials including high strength stainless steels (17-4PH) and nickel based superalloys (Inconel 713, 718, 100, etc.)

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More information on the grades available of our Catamold product line can be found on <http://www.basf.de/catamold>.

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