

The background of the cover is a blue-tinted image featuring a central water droplet falling from a glass, surrounded by numerous molecular models. The molecular models consist of spheres of varying sizes connected by thin lines, representing chemical structures. The overall aesthetic is clean, scientific, and modern.

AMT Design Handbook

Your Strategic Partner in Manufacturing Innovation

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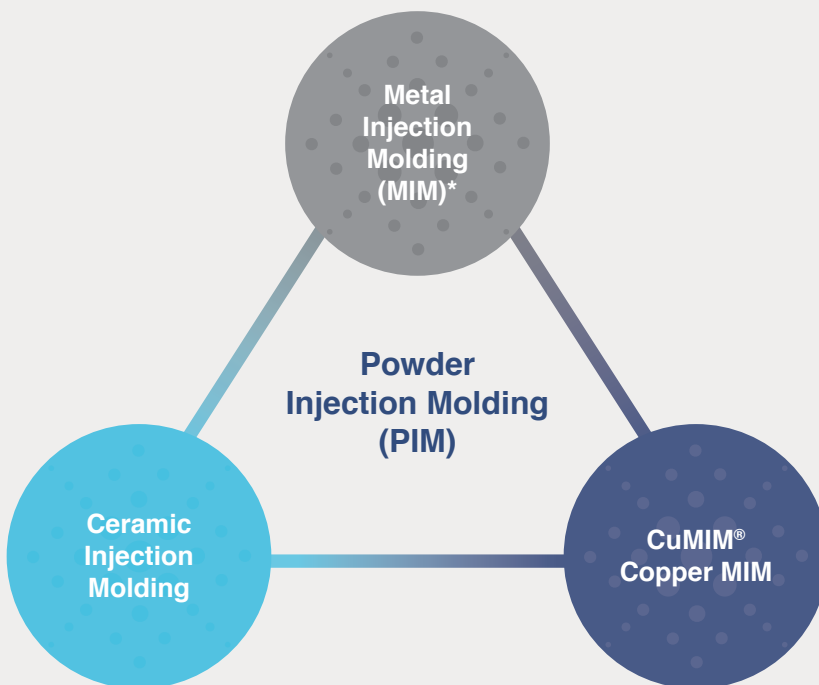
Overview of Powder Injection Molding (PIM)

Powder Injection Molding (PIM), encompasses Metal Injection Molding (MIM) and Ceramic Injection Molding (CIM), utilizes a plastic injection molding machine to form precision engineered geometries. This is accomplished using metal and/or ceramic powder in conjunction with a thermoplastic binder system.

The commercialization of PIM occurred only a few decades ago. However, the process has rapidly grown into a cost-effective manufacturing solution for designs that are not viably produced via conventional forming technologies. At present, PIM is a reliable manufacturing process that offers a high degree of design flexibility in association with cost savings.

PIM excels in applications that require shape complexity and demanding final mechanical, magnetic, thermal, chemical, and electrical properties. Injection molded metals and ceramics offer finished properties not possible via plastics or light metal alloys.

Powder injection molding (PIM) uses thermoplastic binders in conjunction with metal or ceramic powders to form precision-engineered components.



*MIM includes Tungsten Alloy and Super Alloy