MIM-MP35N Injection Molding

Cobalt Alloy Injection Molding

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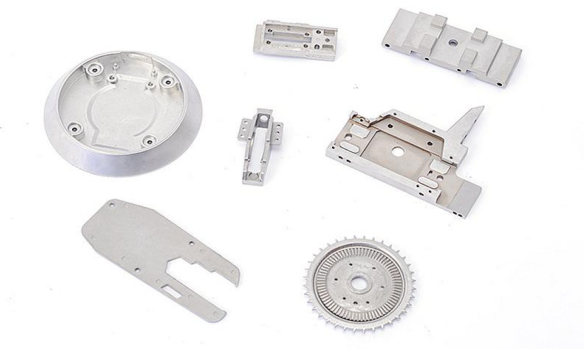
Technical Data: MIM-MP35N Cobalt Alloy

Product Description

MP35N Sintered MIM Parts In Aerospace Components
MP35N sintered MIM parts are components manufactured using the Metal Injection Molding (MIM) process from MP35N alloy, which primarily consists of cobalt (Co), nickel (Ni), chromium (Cr), and molybdenum (Mo). This high-performance alloy is known for its exceptional strength, corrosion resistance, and biocompatibility.

Applications of MP35N sintered MIM parts in aerospace components include:
- Aircraft Fasteners
- Engine Components
- Landing Gear Components
- Actuators and Controls
- Fuel and Hydraulic Systems



Chemical Composition

Element	Cobalt (Co)	Nickel (Ni)	Chromium (Cr)	Molybdenum (Mo)	Iron (Fe)	Carbon (C)	Silicon (Si)	Phosphorus (P)	Sulfur (S)
Percentage	35.00%	35.00%	20.00%	9.00%	0.15%	0.03%	0.15%	0.02%	0.01%

Physical and Mechanical

Alloys	Status	Tensile Strength	Yield Strength	Impact Strength	Hardness	Young's Modulus	Poisson's Ratio	Elongation	Density
		Mpa	Mpa	J	HRC	Gpa	Ratio	% in 25.4 mm	g/cm³
MIM-MP35N	As Sintered	850	700	35	30	220	0.3	10	8.2

Typical Properties

MIM-MP35N Metal Injected Aircraft Fasteners

MIM-MP35N metal-injected aircraft fasteners provide exceptional strength and durability, ensuring the integrity and safety of critical aircraft components. MP35N's high tensile strength and resistance to fatigue and stress corrosion cracking are essential for fasteners in aerospace applications.

MP35N fasteners offer superior corrosion resistance, crucial in aerospace components exposed to varying weather conditions and extreme altitudes. Their corrosion resistance ensures that fasteners maintain their functionality over extended periods, reducing maintenance requirements and minimizing the risk of component failure. Additionally, the precision attainable through the metal injection molding process allows for the creation of complex and highly precise fasteners, ensuring secure and reliable connections within aircraft structures.

Note

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Typical Properties

MIM-MP35N MIM sintered Engine Components

MIM-MP35N MIM sintered engine components offer a range of significant advantages that enhance the performance and durability of aerospace and automotive engines. Firstly, these components possess exceptional high-temperature stability, allowing them to withstand the extreme heat generated within engines. Whether used in aircraft turbines or automotive powerplants, MP35N's heat resistance ensures that engine components maintain their structural integrity and mechanical properties, contributing to prolonged service life and reduced maintenance requirements.

Secondly, MP35N engine components are renowned for their superior corrosion resistance, a critical attribute in engines exposed to varying environmental conditions. Whether in aircraft engines facing high-altitude moisture or automotive engines exposed to road salt, these components resist corrosion effectively, ensuring the longevity and reliability of engine systems.

MIM-MP35N Injection molding Actuators and Controls

MIM-MP35N injection-molded actuators and controls bring many advantages to industries where precision and reliability are paramount. These components are known for their exceptional strength and durability, making them ideal for actuation and control systems applications. MP35N's high tensile strength and resistance to stress corrosion cracking ensure these components maintain their structural integrity even in high-stress environments.

Secondly, MP35N actuators and controls provide exceptional corrosion resistance, which is crucial in applications exposed to harsh environmental conditions. In marine, aerospace, and industrial settings, where components are subjected to moisture, saltwater, and corrosive gases, MP35N's ability to resist corrosion ensures the longevity and reliability of actuation and control systems.

MIM-MP35N injection-molded Fuel and Hydraulic Systems

MIM-MP35N injection-molded components in fuel and hydraulic systems provide a range of benefits that are pivotal for the efficient and reliable operation of these critical systems. Firstly, these components are renowned for their exceptional corrosion resistance, a crucial attribute in environments where exposure to moisture, hydraulic fluids, and corrosive chemicals is every day. MP35N's ability to resist corrosion ensures the integrity of fuel and hydraulic systems, preventing degradation and minimizing the risk of leaks, which could lead to costly system failures.

Secondly, MP35N components in fuel and hydraulic systems offer superior mechanical strength and durability. These components endure high pressures, mechanical stresses, and temperature fluctuations, all typical in fluid systems. The robustness of MP35N ensures that components maintain their functionality and structural integrity, even in the most demanding conditions.

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