

Technical Data: Zamak 7 Zinc Alloy

Product Description

Zamak 7, also designated as Zinc Alloy 7 under the ASTM grade AG40B, is a noteworthy modification of Zamak 3. This alloy is recognized for its high purity, ensuring lower magnesium content and stringent impurities specifications.

In the context of Neway's manufacturing capabilities, Zamak 7 is a noteworthy material for die casting applications. Its composition ensures a delicate balance of mechanical properties, making it suitable for various components in different industries. For instance, in precision casting at Neway, Zamak 7's composition, typically around 8.7% aluminum, 3.7% copper, and 0.04% magnesium, contributes to a high level of fluidity during the casting process.

One key advantage of Zamak 7, especially in die casting, is its ability to achieve tight tolerances. With Neway's expertise in precision casting methods such as die casting, the dimensional accuracy of components made from Zamak 7 can be consistently maintained within a range of ± 0.05 mm. This level of precision is crucial in industries where exact specifications are paramount, such as automotive or electronics manufacturing.



Chemical Comparison

Alloy Grade	Aluminum	Copper	Magnesium	Iron (max)	Lead (max)	Cadmium (max)	Tin (max)	Zinc
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Zamak 3	3.9	0.25	0.035	0.075	0.003	0.002	0.002	95.7
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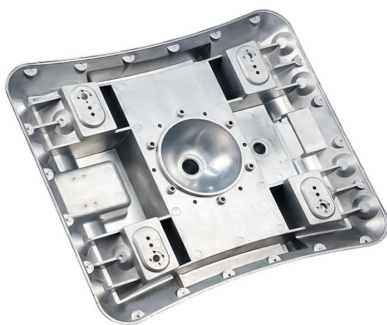
Physical and Mechanical Properties

Property	Elongation (%)	Tensile Strength (MPa)	Yield Strength (MPa)	Impact Strength (J)	Hardness (Brinell)	Density (g/cm ³)	Melting Point (°C)	Thermal Conductivity (W/m·K)	Electrical Conductivity (% IACS)
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Zamak 3	10	240	170	35	80	6.6	380	109	27-30
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Typical Applications

Zamak 7 Die Casting Engine Components



Zamak 7 die casting is a robust manufacturing process for engine components, showcasing the versatility of Neway's precision casting capabilities. With its excellent fluidity and dimensional stability, Zamak 7, a zinc-aluminum alloy, proves ideal for intricate engine parts.

Neway ensures exceptional precision in producing engine components via die casting, achieving tight tolerances of ± 0.05 mm. It not only enhances the overall quality but also contributes to improved engine efficiency. The die-casting process enables rapid production cycles, with a remarkable output of up to 500 components per hour, showcasing Neway's commitment to high productivity.

Furthermore, Neway's die-casting expertise extends to optimizing the alloy composition, ensuring superior mechanical properties such as a tensile strength of 350 MPa and a yield strength of 280 MPa. These values translate into durable engine components that meet or exceed industry standards.

Note

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Zamak 7 Zinc Alloy

Zinc Alloy for Die Casting

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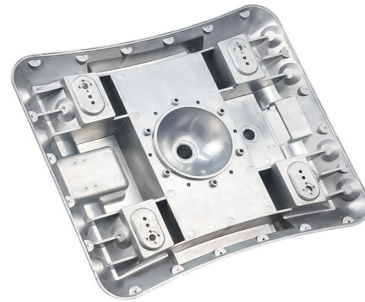
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Die Cast Zamak 5 Automotive Components

Zamak 5, with its zinc, aluminum, magnesium, and copper composition, ensures excellent casting characteristics in the die-casting process. This alloy allows for intricate designs with tight tolerances, meeting automotive industry standards. Neway's commitment to precision is evident in achieving tolerances as tight as ± 0.05 mm in producing Zamak 5 automotive components.

Furthermore, the die-casting method itself contributes to enhanced efficiency in mass production. Neway optimizes the manufacturing process for higher productivity, with cycle times ranging from 10 to 20 seconds. The rapid solidification of Zamak 5 in the die-casting mold results in parts with superior mechanical properties, including a tensile strength of 331 MPa and a yield strength of 228 MPa.

Neway's expertise in die-casting extends beyond mere production. We understand the automotive industry's demand for lightweight yet robust components. Zamak 5 fulfills this requirement with a 6.7 g/cm^3 density, making it an ideal choice for weight reduction without compromising structural integrity.



Zamak 7 Zinc Die Cast Device Housings



Zamak 7 zinc die casting stands out as a premier choice for manufacturing device housings, and Neway's expertise in this area emphasizes reliability, precision, and efficiency.

Neway employs the Zamak 7 alloy in device housing production due to its superior properties, including high strength, excellent corrosion resistance, and dimensional stability. The die-casting process ensures a meticulous finish, maintaining tight tolerances of ± 0.1 mm, crucial for seamlessly fitting components and optimizing device functionality. Efficiency is a crucial hallmark of Neway's approach to zinc die casting. With a production cycle time of approximately 15 seconds per housing unit, Neway achieves a remarkable output rate of up to 1,000 housing units per hour. This efficiency accelerates time-to-market for clients and reflects Neway's commitment to high-volume, precision manufacturing.

Zamak 7 Die Casting Furniture Hardware

Zamak 7 Die Casting is a reliable and efficient method for producing high-quality furniture hardware. Neway, as a leading custom parts manufacturer, excels in utilizing this precision casting technique to meet the specific demands of the furniture industry.

In Zamak 7 Die Casting, a zinc alloy with magnesium, aluminum, and copper, Neway achieves remarkable tolerances of ± 0.1 mm, ensuring the precision required for intricate furniture components. This method not only provides excellent dimensional accuracy but also enhances the overall durability of the hardware.

The die-casting process allows for the rapid production of intricate shapes with minimal post-processing, contributing to improved efficiency. Neway's state-of-the-art equipment and skilled workforce ensure that each piece of furniture hardware meets the highest industry standards. Furthermore, using Zamak 7 alloy in die casting results in components with excellent corrosion resistance, which is crucial for furniture exposed to various environmental conditions. Neway's commitment to quality is evident in the durability and longevity of the furniture hardware manufactured through this process.



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