

Technical Data: Zamak 2 Zinc Alloy

Product Description

Zamak 2 is a zinc alloy that falls under the broader category of Zinc-Aluminum-Magnesium-Copper (ZAMAK) alloys. Zamak 2 consists of approximately 4% aluminum, 3% copper, and a nominal amount of magnesium. This alloy is widely used in the die-casting process, offering notable advantages for various applications.

In the realm of precision casting, Neway's expertise in Zinc Alloy Die Casting, including Zamak 2, showcases its commitment to delivering high-quality custom parts. The composition of Zamak 2 provides a good balance of mechanical properties, making it suitable for components requiring both strength and dimensional accuracy.

One notable feature of Zamak 2 is its excellent casting fluidity, ensuring intricate details can be faithfully reproduced in the final product. Neway leverages this characteristic to produce finely crafted parts with tight tolerances, meeting the demanding requirements of modern industries.



Chemical Comparison

Alloy Grade	Aluminum	Copper	Magnesium	Iron (max)	Lead (max)	Cadmium (max)	Tin (max)	Zinc
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Zamak 2	3.5	0.25	0.02	0.075	0.003	0.002	0.002	95.7
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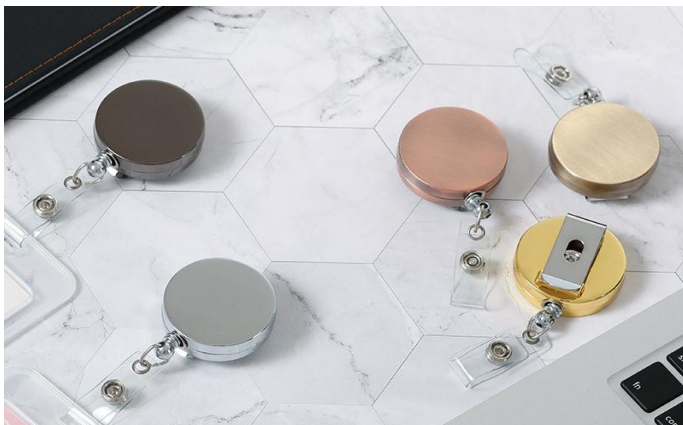
Physical and Mechanical Properties

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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Value	2	250	180	45	70	6.6	380	109	27-30
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Typical Applications

Zamak 2 Die Casting Parts in Decorative and Functional Consumer Goods



From a decorative standpoint, Zamak 2 Die Casting allows for intricate designs and fine detailing. The material's fluidity during casting ensures that even complex shapes are faithfully reproduced with high precision. It is especially beneficial when crafting visually appealing consumer goods, where aesthetics play a crucial role.

In terms of functionality, Zamak 2 Die Casting excels in providing components with excellent dimensional stability and tight tolerances. The manufacturing process enables the production of parts with minimal variation, contributing to the overall efficiency of the final product. Moreover, the inherent corrosion resistance of the alloy enhances the durability of consumer goods, ensuring a longer lifespan. Considering efficiency, Zamak 2 Die Casting stands out with its rapid cycle times and high production rates. The quick solidification of the material allows for short cycle times, contributing to increased productivity in the manufacturing process. The efficient use of energy and resources aligns with sustainable production principles.

Note

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Zamak 2 Zinc Alloy

Zinc Alloy for Die Casting

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Zamak 2 Die Casting Parts in Electronic Watch Housings

Firstly, the zinc-aluminum alloy composition of Zamak 2 ensures a balance between strength and machinability, making it an ideal choice for intricate components like those found in electronic watches. The die-casting process contributes to creating complex and detailed designs with tight tolerances, a crucial aspect in producing watch housings where precision is paramount.

The rapid solidification characteristics of Zamak 2 Die Casting lead to enhanced productivity. The quick cycle times result in a streamlined manufacturing process, allowing for higher production volumes within a shorter timeframe. It aligns seamlessly with the demands of the electronics industry, where time-to-market is a critical factor. Moreover, the corrosion resistance of Zamak 2 ensures the longevity of electronic watch housings, safeguarding the delicate internal components. It is particularly vital in watches, where durability and longevity are valued characteristics.



Electrical and Electronic Housings Zamak 2 Die Casting



High Strength and Durability: Zamak 2 exhibits a high tensile strength of approximately 360 MPa, ensuring robust and durable housings. It is crucial in the electrical and electronic industry, where components are subjected to various mechanical stresses.

Precision and Dimensional Accuracy: Die casting, especially with Zamak 2, allows for precise and highly accurate production of intricate housing designs. The process offers tight tolerances, typically within ± 0.1 mm, ensuring that the housing components fit seamlessly and function effectively.

Excellent Thermal Conductivity: Zamak 2 has good thermal conductivity, a crucial factor for electronic housings. Efficient heat dissipation is essential in preventing overheating of electronic components. Zamak 2's thermal conductivity, around 113 W/(m·K), maintains optimal operating temperatures.

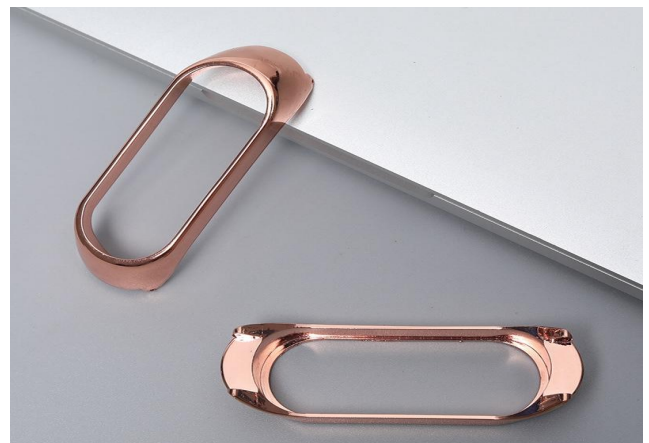
Surface Finish Options: Zamak 2 die casting allows for various surface finishes, including coatings and plating, meeting functional and aesthetic requirements. This versatility enables Neway to deliver products with the desired appearance and protective features.

Zamak 2 Die Casting Sporting Goods Components

Zamak 2 Die Casting is a highly suitable manufacturing method for producing Sporting Goods Components due to its distinct precision, durability, and cost-effectiveness advantages.

Firstly, Zamak 2, a zinc alloy known for its exceptional casting properties, ensures high precision in producing intricate components. With a dimensional accuracy of up to ± 0.1 mm, Neway's Zamak 2 Die Casting guarantees the creation of finely detailed sporting goods components. This precision is crucial for firearm parts, where tight tolerances are paramount for optimal functionality.

Moreover, the superior strength and hardness of Zamak 2 make it an ideal choice for manufacturing components that require robustness and resistance to wear and tear. Sporting goods often endure rigorous use, and Zamak 2's hardness, with a Brinell hardness number of 82, ensures longevity and reliability.



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