

ZA-8 Zinc Alloy

Zinc Alloy for Die Casting

NEWAY PRECISION WORKS

NewayPrecision

www.newayprecision.com

Technical Data: ZA-8 Zinc Alloy

Product Description

ZA-8 is a zinc-aluminum alloy with specific properties that suit certain manufacturing applications. In the context of Neway's expertise in custom parts manufacturing, ZA-8 may be utilized in precision casting methods such as die casting.

Die casting involves injecting molten metal into a mold cavity under high pressure. ZA-8, composed of approximately 8% aluminum and a small amount of copper, exhibits enhanced mechanical properties compared to conventional zinc alloys. This alloy provides improved strength, hardness, and wear resistance, making it particularly advantageous for applications where durability is crucial.

In Neway's production processes, ZA-8 can be employed in die casting to create intricately shaped components with tight tolerances. The alloy's composition contributes to efficient casting and machining, ensuring that final parts meet stringent quality standards.

Moreover, ZA-8 alloy die casting offers exceptional surface finish and detail resolution. Parts produced using this method exhibit a smooth surface finish of Ra 1.6, eliminating the need for extensive post-processing. It not only enhances the aesthetic appeal of the components but also streamlines the production timeline.



Chemical Comparison

Alloy Grade	Aluminum	Copper	Magnesium	Iron (max)	Lead (max)	Cadmium (max)	Tin (max)	Zinc
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ZA-8	8	2	0.02	0.075	0.003	0.002	0.002	88
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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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ZA-8	5	300-320	180-200	60-80	90-100	6.8-7.1	380-386	109	27-30
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Typical Applications

ZA-8 Alloy Die Casting Automotive Components



In the automotive industry, where stringent tolerances are paramount, ZA-8 alloy die casting offers a remarkable solution. Neway's die-casting processes ensure a tolerance level as tight as ± 0.02 mm, surpassing industry standards. This level of precision is crucial for components like engine parts, transmission housings, and intricate geometries in automotive designs.

Moreover, ZA-8 alloy's excellent machinability enhances the efficiency of the manufacturing process. Neway's cutting-edge die-casting technology, coupled with CNC machining, achieves remarkable efficiency gains, reducing production time by up to 15% compared to conventional methods.

Utilizing ZA-8 alloy in die casting meets and often exceeds the automotive industry's rigorous quality standards. The resulting components exhibit superior corrosion resistance, crucial for ensuring the longevity and reliability of automotive systems, especially in diverse environmental conditions.

Note

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ZA-8 Alloy Die Cast Electromagnetic Shieldings

ZA-8 alloy is a notable material in die casting, particularly for electromagnetic shieldings. Neway, as a leading custom parts manufacturer, understands the significance of ZA-8 alloy in achieving superior electromagnetic shielding performance.

In precision casting, Die casting, a method Neway excels in, produces intricate parts with high dimensional accuracy. ZA-8, a zinc-aluminum alloy, is renowned for its excellent strength and electrical conductivity, making it an ideal choice for electromagnetic shielding applications. Die casting of ZA-8 alloy at Neway ensures a tight tolerance range, typically within ± 0.005 inches, ensuring precise dimensions critical for electromagnetic shielding effectiveness. The process also yields a smooth surface finish, contributing to the overall efficiency of the shielding.



ZA-8 Alloy Die Cast Antenna Mounts And Enclosures



The ZA-8 alloy, composed primarily of zinc, aluminum, copper, and magnesium, offers a winning combination of strength, durability, and corrosion resistance. In the context of antenna mounts and enclosures, this alloy's tensile strength of approximately 42,000 psi ensures robust structural integrity. It is crucial in outdoor environments where exposure to varying weather conditions and mechanical stress is inevitable.

As a precision casting method employed by Neway, Die casting provides a cost-effective solution for large-scale production of antenna mounts and enclosures. The high dimensional accuracy and repeatability achieved through this process align with the strict tolerances required to integrate antenna components seamlessly. Moreover, ZA-8 alloy die casting enables the production of intricate designs and complex geometries, enhancing the aesthetic appeal of antenna mounts and enclosures while maintaining functionality. The efficient cycle times in die casting contribute to Neway's commitment to on-demand production, ensuring timely delivery without compromising quality.

ZA-8 Alloy Die Cast Machinery Parts

Die casting involves injecting molten metal into a mold cavity under high pressure, resulting in complex and accurate parts with minimal post-processing. ZA-8's composition of 8% aluminum, 3% copper, and a zinc base ensures a favorable combination of strength, dimensional stability, and corrosion resistance.

Neway's proficiency in die-casting methods, including ZA-8 alloy, enables the production of machinery parts with tight tolerances. For instance, achieving a dimensional tolerance of ± 0.005 inches is a familiar feat, ensuring each component's precise fit and functionality.

Efficiency is a crucial aspect of Neway's die-casting processes. The use of ZA-8 alloy, with its low melting point and high fluidity, contributes to shorter cycle times. Neway's die-casting machinery is optimized for rapid production, achieving an impressive throughput of up to 1,000 parts per hour.



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