

Zamak 3 Zinc Alloy

Zinc Alloy for Die Casting

NEWAY PRECISION WORKS

NewayPrecision

www.newayprecision.com

Technical Data: Zamak 2 Zinc Alloy

Product Description

Zamak 3 is a zinc alloy with significant relevance in metal manufacturing, particularly in die-casting. Comprising primarily of zinc with small proportions of aluminum, magnesium, and copper, Zamak 3 is renowned for its exceptional mechanical properties and ease of casting.

In the context of Neway's manufacturing capabilities, Zamak 3 plays a pivotal role in the die-casting method. The alloy's composition, with approximately 4% aluminum, 0.035% magnesium, and 0.02% copper, contributes to its impressive combination of strength and flexibility. It makes it a preferred choice for applications requiring intricate designs and precision.

In die casting at Neway, Zamak 3 offers noteworthy advantages. The alloy's melting point is around 385°C (725°F), ensuring efficient and energy-effective processing. With a 6.6 g/cm³ density, it provides components with a solid structure while maintaining a streamlined manufacturing process.



Chemical Comparison

Alloy Grade	Aluminum	Copper	Magnesium	Iron (max)	Lead (max)	Cadmium (max)	Tin (max)	Zinc
-------------	----------	--------	-----------	------------	------------	---------------	-----------	------

Zamak 3	3.9	0.25	0.02	0.075	0.003	0.002	0.002	95.9
---------	-----	------	------	-------	-------	-------	-------	------

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)
----------	----------------	------------------------	----------------------	---------------------	--------------------	------------------------------	--------------------	------------------------------	----------------------------------

Zamak 3	3	260	190	50	80	6.6	380	109	27-30
---------	---	-----	-----	----	----	-----	-----	-----	-------

Typical Applications

Zamak 3 Die Cast Massager Handles Manufacturing



In the die-casting process, molten Zamak 3 is injected into a steel mold, ensuring intricate details and a smooth finish. Neway's die-casting capabilities, encompassing both hot and cold chamber methods, provide flexibility in meeting diverse client requirements.

Neway employs advanced die-casting machines with a tolerance range of ±0.1 mm for dimensional accuracy, ensuring consistency and adherence to design specifications. This precision is critical, particularly for ergonomic massager handles where user comfort is paramount.

Zamak 3 enhances the handles' durability, corrosion resistance, and heat dissipation, contributing to an extended product lifespan. Neway's commitment to quality is evident in its adherence to stringent industry standards, including ISO 9001, maintaining efficiency and reliability throughout production.

Note

The above data are reference material science data. This data reference is not binding and is not considered as authoritative test data. If your material requirements are extremely precise, please contact our material engineers. Tel | +86 18926788217 | Web | www.newayprecision.com | Contact Neway



Zamak 3 Zinc Alloy

Zinc Alloy for Die Casting

NEWAY PRECISION WORKS

NewayPrecision

www.newayprecision.com

Zamak 3 Die Cast Bottle Cap Customization

The die-casting process at Neway ensures that each bottle cap is meticulously crafted with a tolerance level of ± 0.05 mm, guaranteeing a snug fit and reliable seal on the bottle. This precision is crucial for maintaining the integrity of the contents and preventing leakage. Zamak 3's inherent characteristics, including high fluidity during the die-casting process, enable intricate designs and delicate detailing on the bottle caps. Neway's state-of-the-art die-casting machines, operating around 440°C , ensure the molten alloy flows smoothly into the molds, capturing even the most intricate features.

The customization options at Neway are extensive, ranging from embossed logos and brand names to unique textures and finishes. Neway can achieve a range of surface finishes, from polished and matte to textured, utilizing advanced injection molding techniques, providing a premium look and feel to the bottle caps.



Zamak 3 Bag Hardware Die Casting Supplier

The die-casting process at Neway guarantees precision, with a tolerance level of ± 0.1 mm. It is particularly crucial for bag hardware, where components like buckles, clasps, and fasteners require exact specifications to ensure seamless functionality and durability.

Zamak 3's excellent flowability at high temperatures facilitates the intricate detailing and complex geometries often associated with bag hardware. Neway's die-casting machines, operating around 440°C , ensure the molten alloy fills the molds uniformly, creating finely crafted hardware pieces.

Customization is a crucial strength at Neway. The company offers a range of surface finishes for bag hardware, from polished and brushed to antique and matte, allowing clients to align the hardware aesthetics with their brand identity. Additionally, Neway can incorporate brand logos and unique designs, enhancing the visual appeal of the bag hardware.



Zamak 2 Die Casting Sporting Goods Components

Zamak 3, composed of zinc, aluminum, magnesium, and copper, offers a winning combination of strength and cost-effectiveness. In die casting, molten Zamak 3 is injected into high-quality steel molds, creating fasteners with tight tolerances. The die-casting process employed by Neway ensures precision with tolerances as low as ± 0.05 mm, guaranteeing a snug fit and optimal functionality.

The inherent corrosion resistance of Zamak 3, with a salt spray resistance of over 120 hours, makes these die-casted fasteners ideal for diverse applications, from automotive to electronics. Neway's commitment to quality extends beyond production, as each fastener undergoes rigorous testing to meet or exceed industry standards. Moreover, the efficiency of the die-casting method employed by Neway is notable. With cycle times as short as 15 seconds, Neway ensures high productivity without compromising the quality of the fasteners. This efficiency translates into client cost savings without sacrificing the precision required for critical applications.



Note

The above data are reference material science data. This data reference is not binding and is not considered as authoritative test data. If your material requirements are extremely precise, please contact our material engineers. Tel | +86 18926788217 | Web | www.newayprecision.com | Contact Neway

