

Cast Aluminum 360

Aluminum Alloy for Casting

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Technical Data: Cast Aluminum 360

Product Description

Precision Casting:

Aluminum 360 in Die Casting: It's a favored material for die casting due to its high fluidity, which enables intricate designs and complex shapes. Its excellent machinability allows tight tolerances and smooth surface finishes, making it ideal for high-precision parts, such as electronics or automotive components housings.

Sand Casting:

Aluminum 360's Suitability: In sand casting, its fluidity allows it to fill the fine details of molds, resulting in precise and detailed casts. This alloy's properties make it an excellent choice for manufacturing parts with complex geometries and a high degree of intricacy, such as engine components or decorative elements in architectural applications.

Gravity Casting:

Benefits in Gravity Casting: Aluminum 360 performs well due to its high strength, corrosion resistance, and thermal conductivity. It's often used for parts where strength and durability are essential, like aerospace components or structural parts in machinery and equipment.



Chemical Comparison

Silicon (Si)	Iron (Fe)	Copper (Cu)	Magnesium (Mg)	Manganese (Mn)	Nickel (Ni)	Zinc (Zn)	Titanium (Ti)	Other Elements
9.00 - 10.00	0.60 - 1.20	0.50 - 1.20	0.35 max	0.35 max	0.25 max	0.25 max	0.15 max	Each 0.05 max, Total 0.15 max

Physical and Mechanical Properties

Property	Tensile Strength (MPa)	Yield Strength (MPa)	Hardness (Brinell)	Shear Strength (MPa)	Impact Strength (J)	Fatigue Strength (MPa)	Thermal Conductivity (W/m·K)	Density (g/cm³)	Melting Range (°C)
Value (Typical)	230	170	65	150	6	70	120	2.68	582 - 652

Typical Applications

Aluminum 360 Casting Automotive Components



Aluminum 360 casting primarily provides significant automotive component advantages due to its lightweight yet robust nature. The low density of Aluminum 360 contributes to creating automotive parts that are notably lighter than their counterparts made from other materials. This characteristic is instrumental in enhancing fuel efficiency and overall vehicle performance, aligning with the automotive industry's continuous pursuit of more sustainable and eco-friendly solutions.

The high strength-to-weight ratio of Aluminum 360 is another standout feature. Despite its lightweight composition, it exhibits excellent strength, ensuring that automotive components maintain durability and structural integrity. This attribute is crucial in applications where strength and reduced weight are paramount, improving vehicle efficiency and performance.

Note

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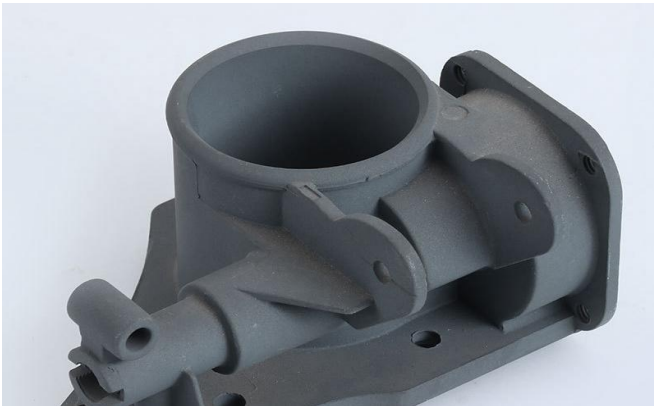
Aluminum 360 Casting Enclosures for Electronic Devices

Aluminum 360 casting offers compelling benefits for enclosures used in electronic devices, making it a preferred material for this application. One key advantage is the material's excellent thermal conductivity. Aluminum efficiently dissipates heat generated by electronic components, preventing overheating and ensuring optimal device performance. This property is particularly crucial for enclosures housing sensitive electronic circuits that can be affected by high temperatures.

The lightweight nature of Aluminum 360 is another significant benefit. Electronic devices are becoming increasingly compact and portable, and using lightweight materials is essential for achieving sleek designs without compromising structural integrity. Aluminum 360's low density allows for creating durable and lightweight enclosures, meeting the demands of modern consumer electronics.



Aluminum 360 Casting Pump Housings



Aluminum 360 casting offers several key benefits when used for pump housings, making it a material of choice for various applications in the pumping industry. One primary advantage is the material's excellent corrosion resistance. Pump housings often come into contact with liquids and are exposed to varying environmental conditions. The natural corrosion resistance of Aluminum 360 ensures the durability of pump housings, reducing the risk of degradation over time and enhancing the reliability of pumping systems.

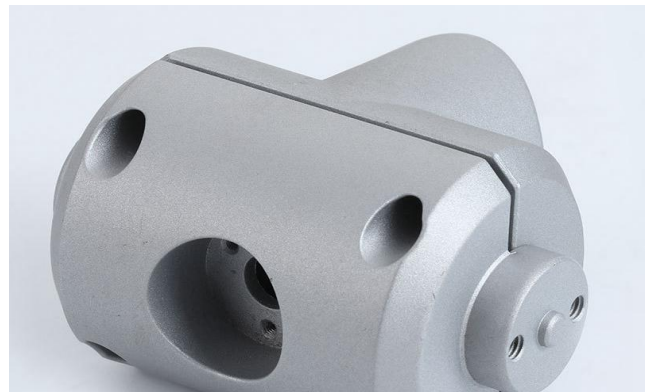
The lightweight nature of Aluminum 360 is particularly beneficial for pump housings. Pumps are integral components in many industries, and using lightweight materials helps optimize energy efficiency and ease of installation. Aluminum 360's low density allows for the production of pump housings that are not only robust but also contribute to overall system efficiency by minimizing weight and energy requirements.

Furthermore, Aluminum 360 casting facilitates the creation of intricate and complex designs, which is advantageous for pump housing applications. The casting process allows for producing pump housings with precise shapes and features, meeting the specific requirements of different pump systems. This versatility in design contributes to the adaptability of Aluminum 360 for a wide range of pumping applications across industries.

Aluminum 360 Casting Bicycle Components

The utilization of Aluminum 360 casting in the production of bicycle components offers numerous advantages, making it a favored material for various parts in the cycling industry. One primary benefit is its lightweight composition. Aluminum 360's low density enables the creation of bicycle components that are both durable and exceptionally light, contributing to overall weight reduction in bicycles. It is crucial for cyclists, as lighter components enhance maneuverability, speed, and overall riding efficiency.

Another notable advantage is the material's excellent strength-to-weight ratio. Despite its lightweight nature, Aluminum 360 provides robustness and structural integrity to bicycle components. It ensures that critical parts, such as frames, handlebars, and wheel components, maintain durability and performance under the stresses encountered during cycling activities.



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