

Copper Alloys Die Casting

Copper Alloy for Die Casting

NEWAY PRECISION WORKS

NewayPrecision

www.newayprecision.com

Technical Data: Cast Copper Alloys

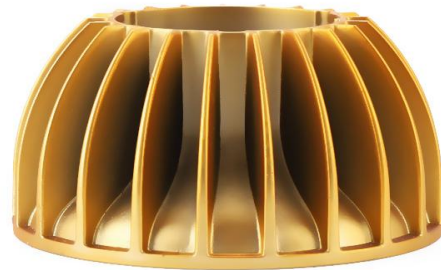
Product Description

Die-cast copper alloys have high thermal conductivity, high electrical conductivity, and excellent corrosion resistance. Although the melting point of copper alloy is high, it can still meet the necessary conditions for die casting. The die-casting principle of aluminum alloy and zinc alloy is the same. The die-casting of copper alloy can create more complex geometric shapes.

Copper alloy die castings are widely used, such as radiators commonly used in the telecommunications industry, electrodes and electric shocks in consumer electronics, Etc. It can also be used for pumps, valves, propellers, and other components in water conservancy, energy, and marine industries.

Commonly used copper alloys in Neway are:

- Copper Alloy C87500
- Copper Alloy C83600
- Copper Alloy C92200
- Copper Alloy C84400



Chemical Composition

Copper (Cu)	Lead (Pb)	Tin (Sn)	Zinc (Zn)	Other Elements
Copper Alloy C87500	87.00%	4.00%	9.00%	0.50%
Copper Alloy C83600	85.00%	5.00%	5.00%	5.00%
Copper Alloy C92200	88.00%	3.00%	8.00%	0.20%
Copper Alloy C84400	81.00%	7.00%	11.00%	0.50%

Physical and Mechanical

Grade	Tensile Strength	Yield Strength	Hardness	Shear Strength	Impact Strength	Fatigue Strength	Thermal Conductivity	Density	Melting Range
	(MPa)	(MPa)	(Brinell)	(MPa)	(J)	(MPa)	(W/m·K)	(g/cm ³)	(°C)
Copper Alloy C87500	315	120	85	185	10	115	125	8.88	920-980
Copper Alloy C83600	165	65	75	140	4	65	80	8.87	870-890
Copper Alloy C92200	240	85	75	160	7	90	121	8.93	890-950
Copper Alloy C84400	310	95	90	180	8	100	115	8.92	880-940

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



Copper Alloys Die Casting

Copper Alloy for Die Casting

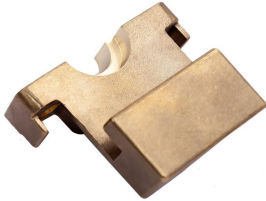
NEWAY PRECISION WORKS

NewayPrecision

www.newayprecision.com

Typical Properties

Copper Alloy C87500



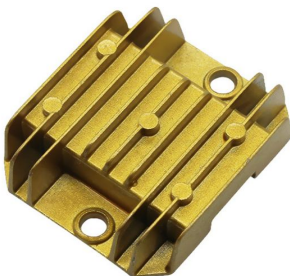
Copper Alloy C87500 or Copper Silicon is a premier option for die casting within the manufacturing industry. Its exceptional properties make it a valuable choice. C87500 offers outstanding electrical conductivity, which is crucial in various applications. Moreover, it boasts excellent corrosion resistance, ensuring longevity even in challenging environments. Its high strength is also a defining feature, providing durability and structural integrity in die-casting applications. In die casting, Copper Alloy C87500 finds widespread use in electrical components, particularly in connectors and terminals. Its exceptional electrical conductivity ensures efficient current flow, making it ideal for such applications. Furthermore, its corrosion resistance is crucial when exposed to diverse conditions, ensuring these components maintain their functionality over time.

Copper Alloy C83600

Copper Alloy C83600, commonly called "Red Brass" or "85-5-5-5," is a well-regarded material in die casting. Its exceptional casting properties make it a preferred choice in various industrial applications. C83600 exhibits remarkable machinability, facilitating its processing and shaping into intricate components. Furthermore, corrosion resistance ensures longevity and reliability in diverse environments. In the realm of die casting, Copper Alloy C83600 is extensively employed in manufacturing valve components, pump parts, and various industrial fittings. Its superb machinability makes it a suitable material for crafting these intricate and precision-demanding parts. This versatility positions C83600 as a valuable resource in industries such as Power Tools and Locking Systems, where the quality and longevity of these components are vital for smooth operations.



Copper Alloy C92200



Copper Alloy C92200, often called C92200, boasts a diverse range of applications in die-casting due to its exceptional properties. Known aliases for this alloy include "C922" or "Die-Casting Copper." Regarding its key features, the C92200 is prized for its superb casting properties, offering manufacturers a reliable and efficient material for die-casting processes. This alloy excels in heat resistance, making it suitable for applications where temperature fluctuations are typical. Its fine grain structure and excellent machinability contribute to precise production, with specific tolerances often reaching within a range of micrometers. As for its applications in die casting, C92200 shines in crafting components such as water meters, pump parts, and plumbing fixtures, where high precision and durability are essential. In Consumer Electronics and Telecommunication, for instance, C92200 components can be found in connectors and precision components for electronic devices, showcasing its adaptability to diverse industries.

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

