# MICC Magnesium Alloy (AZ91D AM50A AM60B)

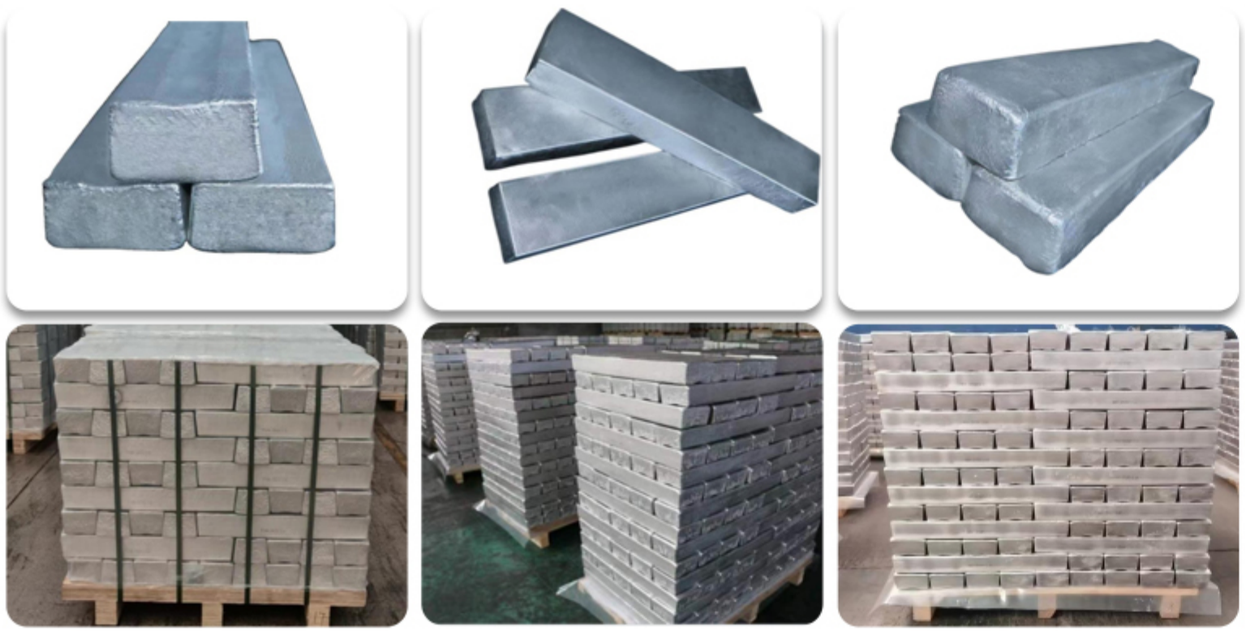
## Basic information:

1.Molecular formula: Mg
2.Properties: Silvery white.
3.Model number :AZ91D AM50A AM60B Alloy Ingot
4.Storage: The package shall be sealed, lightly loaded and unloaded, moisture-proof and waterproof, and shall be stored in a cool, dry and ventilated warehouse.

Magnesium is an indispensable non-ferrous metal powder in the current high-tech field, which is widely used in aviation, aerospace, automobile, petroleum, chemical industry, medicine, metallurgy and other industries.

| | |
|---|---|
| Product name: | Magnesium Alloy |
| Alloy type: | Alloy |
| Weight: | 5KG 6KG 8/7.5KG 10KG 12KG |
| Color: | Silver white |
| HS Code: | 8104110000 |
| Model Standard: | ASTM Standard |
| Shape: | Ingot,rod |
| Application: | Metallurgy |

## Products Pictures



## Magnesium Alloy Ingot Size:

| Trapezoid Ingot | Small Face | Big Face | Height |
|---|---|---|---|
| 5KG | 54.5*6 | 57*8.5 | 7.5 |
| **Short Ingot** | | | |
| 5KG | 55*11 | 55.5*11.8 | 5 |
| 6KG | 55*11 | 56*12 | 5.5 |
| 10KG | 55*11 | 56.5*12.5 | 8.5 |
| **Long Ingot** | | | |
| 6KG | 62*11 | 63*11.8 | 5 |
| 8/7.5KG | 62*11 | 63.5*12 | 6.5 |
| 12KG | 62*11 | 63.7*12.8 | 9.2 |
| **Customized Ingot** | | | |
| 12KG | 65*12 | 67*14 | 8.5 |

## Magnesium Alloy Type & Chemical Composition

| AZ Series | Al | Zn | Mn | Fe | Be (ppm) | Si | Cu | Ni |
|---|---|---|---|---|---|---|---|---|
| AZ91D | 8.5-9.5 | 0.45-0.9 | 0.17-0.4 | ≤0.004 | 5-15 | ≤0.05 | ≤0.025 | ≤0.001 |
| AZ31B | 2.5-3.5 | 0.7-1.3 | 0.2-1 | ≤0.002 | 8-13 | ≤0.1 | ≤0.01 | ≤0.001 |
| AZ63 | 5.5-6.5 | 2.8-3.3 | 0.18-0.5 | ≤0.003 | 5-15 | ≤0.1 | ≤0.008 | ≤0.001 |
| **AM Series** | **Al** | **Zn** | **Mn** | **Fe** | **Be (ppm)** | **Si** | **Cu** | **Ni** |
| AM50A | 4.5-5.3 | ≤0.1 | 0.28-0.5 | ≤0.0040 | 5-15 | ≤0.05 | ≤0.008 | ≤0.001 |
| AM60B | 5.6-6.4 | ≤0.2 | 0.26-0.5 | ≤0.0040 | 5-15 | ≤0.05 | ≤0.008 | ≤0.001 |

| Properties | AZ91D |
|---|---|
| Tensile yield strength [MPa]<br>20℃<br>150℃ | <br>160<br>105 |
| Ultimate tensile strength [MPa]<br>20℃<br>150℃ | 260<br>160 |
| Compression yield strength [MPa] | 160 |
| Elongation in 50 mm [%] | 6 |
| Impact strength [J](2) | 8 |
| Young' s Modulus [GPa] | 45 |
| Hardness, Brinell | 70 |
| Fatigue strength [MPa](3) | 95 |

| Properties | AM50A |
|---|---|
| Tensile yield strength [MPa]<br>20℃<br>150℃ | <br>160<br>105 |
| Ultimate tensile strength [MPa]<br>20℃<br>150℃ | <br>260<br>160 |
| Compression yield strength [MPa] | 160 |
| Elongation in 50 mm [%] | 6 |
| Impact strength [J](2) | 8 |
| Young' s Modulus [GPa] | 45 |
| Hardness, Brinell | 70 |
| Fatigue strength [MPa](3) | 95 |

| Properties | AM60B |
|---|---|
| Tensile yield strength [MPa]<br>20℃<br>150℃ | <br>130<br>90 |
| Ultimate tensile strength [MPa]<br>20℃<br>150℃ | <br>270<br>145 |
| Compression yield strength [MPa] | 130 |
| Elongation in 50 mm [%] | 16 |
| Impact strength [J](2) | 19 |
| Young' s Modulus [GPa] | 45 |
| Hardness, Brinell | 60 |
| Fatigue strength [MPa](3) | 90 |

## Mg Scrap



# CERTIFICATE



**Magnesuim Alloy factory is Fugu Magnesium Group, was established at 2008 and is located in Fugu County, where is Magnesuim Alloy center of CN. The group was acquired by Shanxi Weitian at 2018yr. The project plans to construct 10 sub-projects:**

1)1.1 million tons of tamped coke
2)50,000 tons of metal magnesium
3)1.2 million tons of washed coal
4)300,000 tons of coal tar deep processing
5)100,000 tons of ferrosilicon
6)100,000 tons of magnesium alloy and its deep processing
7)40,000 reduction tanks
8)40 Ten thousand tons of magnesia slag free-burning bricks
9)1.2 million tons of magnesia slag cement
10)2×25MW self-provided power plants, the project plans to invest 2.3 billion CNY.

**At present, 1.1 million tons of tamped coke and 40,000 tons of magnesium metal projects have been completed. MICC TECH. LIMITED as a sales sub-company of Shanxi Weitian, which start to export directly to worldwide.**



**Group Employees: 1000+ Clients: 2,000+ Production Volume: 40,000tons.**

# MICC factory(WEITIAN) Euipment

## 1.Day&Night Check:

We have built a production line of rotary kiln of 4.3 meters in diameter and 64 meters in length with a vertical preheater and a vertical drum cooler. It is the largest-diameter and the most advanced rotary kiln in China′ s magnesium industry. Thus, the whole production process is high-productive, energy-saved and environment-protective, and also the quality of calcined dolomite is guaranteed.



## 2.Reduction Furnace

We have the following two types of reduction furnace:
Conventional Furnace:
Inner diameter:440-450mm,External diameter:353-355mm
Length:3100mm, Thickness:75-77mm
Vertical Furnace:





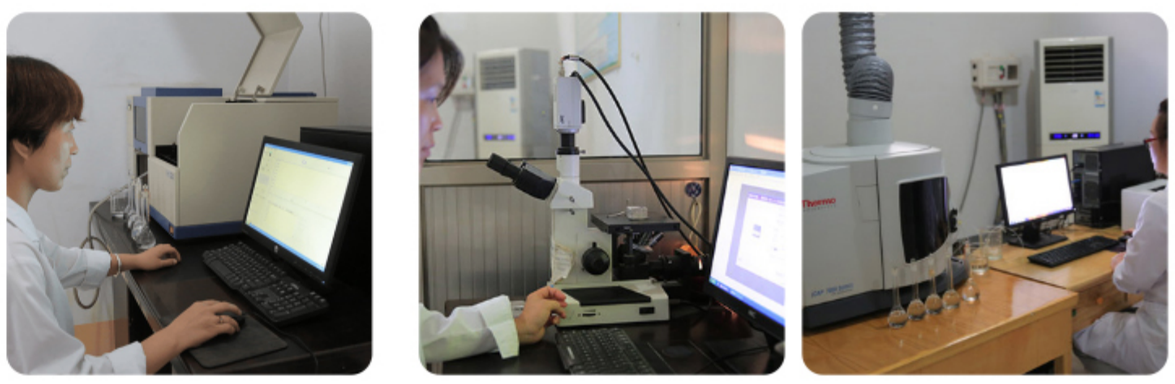
## 3.Energy and Power

The heat for reduction and refining comes from two-stage environment-friendly cold gas generators, the casting process are automatic and continuous. The reduction process is controlled by DCS system, the rotary furnace and melting process are controlled by PLC system, the whole production process achieved informatization and －automation.



## 4.Quality Inspection Center

Our quality inspection center has the following equipment:
Elcectro-thermostatic water pot,chamber type electric resistance furnace, electronic balance,metallograpihc sample polishing machine,ratary vane type vacuum pump, automatic calorimeter, atomic absorption spectrophotometer, metalloscope, salt-mist corrosion tester, water purifier, sample preparation comminuter, jaw crusher, bench lather, metal band sawing machine, hydraulic machine, drilling machine, direct-reading spectrometer, icp spectrometer, tensile testing ma-



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