

AZ63 Magnesium Alloy – Technical Datasheet

1. Product Description

AZ63 is a magnesium–aluminum–zinc alloy offering a balanced combination of strength, ductility and corrosion resistance. It contains moderate aluminum and higher magnesium content compared with AZ91D, resulting in improved ductility with moderate strength suitable for general–purpose die–casting and gravity casting applications.

2. Main Applications

- General–purpose die–cast components
- Automotive housings and brackets
- Machinery casings and electrical components
- Parts requiring good corrosion resistance with moderate strength
- Feedstock for gravity casting or semi-continuous casting billet production

3. Chemical Composition (typical ranges)

Element	Specification (%)
Al	5.5 – 6.5
Zn	2.5 – 3.5
Mn	≥ 0.15
Si	≤ 0.10
Cu	≤ 0.05

Ni	≤ 0.005
Fe	≤ 0.005
Others (each)	≤ 0.02

Values represent typical AZ63 alloy ranges. Actual production may vary slightly depending on melt practice.

4. Mechanical Properties (typical values)

- Tensile Strength (Rm): ~200—230 MPa
- Yield Strength (Rp0.2): ~100—120 MPa
- Elongation: 6—10%
- Hardness: ~55 HB

5. Surface Condition

- Standard as-cast surface
- Clean and free from excessive oxidation, metal chips, or inclusions
- Fresh production suitable for melting and die-casting

6. Dimensions & Weight

- Dimensions: approx. 110 — 120 mm × 59 — 75 mm × 590 — 636 mm
- Weight per ingot: 7—8 kg
- Bundle weight: 900—1200 kg

7. Packaging & Loading

- Bundled on wooden or magnesium-alloy pallets
- Wrapped with plastic foil and secured with PP straps

- Fresh production; free from corrosion or oxidation
- 20-ft container loading: approx. 25 MT
- 40-ft container not recommended (weight & safety considerations)

8. HS Code

8104.19