AZ31B Magnesium Alloy

Product Datasheet

Revision: SHP/AZ31B/07/2018



...where performance matters

A wrought magnesium alloy offering good room temperature strength

For motorsport applications in medium strength service at temperatures below 150°C

Available in sheet, plate, coil and bar, AZ31B magnesium alloy benefits from increased strength and density due to strain hardening with partial anneal (H24 and H26 tempers). The alloy offers excellent weldability and can be machined faster than any other metal. The material is non-magnetic with high electrical and thermal conductivity.



Chemical Composition (weight %)						
min max	Mg Bal Bal	Y 4.75 5.50	Zr 0.40	Nd He 1.50 2.00	avy Rare Earths* 1 2	
Mechanical Properties (mininum tensile properties)						
AZ31B-O 0.5-1.5mm			AZ	AZ31B-O 6.3-75mm		
0.2% Proof Stress Tensile Strength Elongation in 5.65√A AZ31B-O 1.5-6.3mm	Tensile Strength220 MPaElongation in 5.65/A10%		Ten Elor	% Proof Stress Isile Strength Ingation in 5.65 √A 31B-H24 0.5-6.3	105 MPa 220 MPa 8% mm	
0.2% Proof Stress Tensile Strength Elongation in 5.65√A		5 MPa 9 MPa 6	Ten	% Proof Stress Isile Strength Ingation in 5.65 √A	200 MPa 270 MPa 5%	
Characteristics			Applications			
 Good ductility and co 	tance	Proc	Production of intricate motorsport parts			

- High electrical and thermal conductivity
- Good strength at room temperature

- Monocoque construction
- Race chassis, structural engine parts, hydraulics

About Smiths High Performance

Smiths High Performance is a leading stockholder and supplier of high-performance engineering materials to the global motorsport sector. We are supply partners in a range of specialist motorsport markets including Formula 1, Formula E, NASCAR, MOTO GP, WEC & WRC.

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