

ALUMINIUM

5251 - H22



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Aluminium 5251 H22 is a medium-strength alloy known for its good ductility and formability, making it suitable for various applications. It is particularly noted for its high corrosion resistance, especially in marine environments. The H22 temper indicates that the material is work-hardened by rolling and then annealed to a quarter-hard state. This specific temper provides the metal with a balance of strength and ductility.

KEY FEATURES

- Excellent weldability with standard methods
- Good machinability
- Excellent formability
- Good corrosion resistance
- Very good anodising qualities

CHEMICAL PROPERTIES

Magnesium (Mg)	Iron (Fe)	Silicone (Si)	Manganese (Mn)	Zinc (Zn)	Copper (Cu)	Titanium (Ti)	Chromium (Cr)	Other Elements	Aluminium (Al)
1.7-2.4%	0.5%	0.4%	0.1-0.5%	0.15%	0.15%	0.15%	0.15%	0.15%	rest

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	175-260
Yield strength (N/mm ²)	65-215
Elongation (% at break)	4-16
Shear strength (N/mm ²)	125
Hardness - Brinell (HB) max	47-73

PHYSICAL PROPERTIES

Density (kg/m ³)	269	
Modulus of elasticity (Gpa)	70	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	23.5
	0-350°C (µm/m/°C)	24.7
	0-538°C (µm/m/°C)	25.6
Thermal conductivity	at 100°C (W/m.K)	142
	at 500°C (W/m.K)	162
Specific Heat 0-100°C (J/kg.K)	88	
Electrical conductivity (IACS %)	34	
Melting point (°C)	600	

MARKET SECTORS



Marine Equipment

Hulls, decks, components, superstructures



Automotive Industry

Body panels, structural components, fuel tanks



Construction & Architectural

Roofing, cladding, curtain walls, decorative elements



Kitchen Equipment

Cookware, household appliances, utensils



Manufacturing & Industrial

Components of machinery and equipment



Aerospace Industry

Structural components, panels, parts

