

SPECIFICATIONS

Previous AFNOR designation:

- AU6MT

European Standards:

- EN AW-2219 (Al Cu6Mn)

UNS : A92219

COMPOSITION

Copper.....	6.30
Manganese.....	0.30
Zirconium.....	0.18
Vanadium.....	0.10
Titanium.....	0.06
Aluminum.....	Base

TYPICAL MECHANICAL PROPERTIES

- Forged to T6 condition. thickness < 100mm
- Tensile test at ambient temperature, longitudinal direction
- UTS: >400 N/mm²
 - 0.2 % Yield strength: >276 N/mm²
 - Elongation (5d): >5 %
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- T851, T852 and T854 conditions open or closed-die forged. 100/200mm thickness
- Tensile test at ambient temperature, longitudinal direction
- UTS: >395 N/mm²
 - 0.2 % Yield strength: >300 N/mm²
 - Elongation (5d): >6 %

APPLICATIONS

- Aerospace structures and space industry applications

CHARACTERISTICS

- High toughness
- In the T8 condition (cold worked and aged), this alloy has excellent stress corrosion resistance
- Weldable

HEAT TREATMENT

- Solution treatment 535°C
- Water Quench
- Age from 165°C to 195°C to give the properties required
- The most common conditions are T851, T852 and T854. These are defined in Standard NF EN 515.

PHYSICAL PROPERTIES

- Density: 2.84
- Modulus of elasticity in N/mm²:
 - at 20°C: 73.8 x 10³
- Mean coefficient of expansion in m/m.°C:
 - between (-50°C) and 20°C: 20.8 x 10⁻⁶
 - between 20°C and 100°C: 22.5 x 10⁻⁶
 - between 20°C and 200°C: 23.4 x 10⁻⁶
 - between 20°C and 300°C: 24.4 x 10⁻⁶
- Thermal conductivity in W.m/m².°C:
 - at 20°C: 130 (T62, T81 and T87 conditions)
- Mean specific heat in J/g°C:
 - at 200°C: 0.86
- Electrical resistivity in μΩ.cm²/cm
 - at 20°C: 5.7 (T62, T81 and T87 conditions)
- Electrical conductivity in S/m:
 - at 20°C: 17.4 x 10⁶ (T62, T81 and T87 conditions)

Contact:

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The data provided in this document represent typical or average values rather than maximum or minimum guaranteed values. The applications indicated for the grades described are given as guidance only in order to help the reader in his personal assessment. Please note that these do not constitute a guarantee whether implicit or explicit as to whether the grade selected is suited to specific requirements. Aubert & Duval's liability shall not under any circumstances extend to product selection or to the consequences of that selection.