

EN AB 21000 - AlCu4MgTi

Neutral Technical Reference | Cast Aluminium Alloy

Use for product identification and preliminary technical review only. Confirm final chemistry, properties, certification and delivery specification with the actual supplying producer before order.

Identification

Field	Reference
Standard	UNI EN 1676:2020
Alloy group	AlCu
Numerical designation	EN AB 21000
Chemical designation	AlCu4MgTi

Chemical composition - source-listed limits

Element	Minimum (%)	Maximum (%)
Si	-	0.15
Fe	-	0.30
Cu	4.20	5.00
Mn	-	0.10
Mg	0.20	0.35
Zn	-	0.10
Ni	-	0.05
Cr	-	0.05
Pb	-	0.05
Ti	0.15	0.25
Other, each	-	0.03
Other, total	-	0.10

The original source table also contains additional element columns without clearly populated limits in the parsed text. Those values are intentionally not inferred here.

Mechanical properties - separately cast samples

Process	Temper	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)	HBW
Sand casting	T4	300	205	5-8	90
Shell casting	T4	325	205	8-13	90

Physical properties - indicative EN AB values

Property	Value
Density / specific weight	2.79 kg/dm3
Solidification / casting interval	550-650 C
Electrical conductivity	15-23 MS/m
Thermal conductivity at 20 C	110-145 W/(m K)
Thermal expansion 20-100 C	23.4 x 10 ⁻⁶ /C
Thermal expansion 20-200 C	24.4 x 10 ⁻⁶ /C

Property	Value
Recommended sand-casting interval	700-745 C
Recommended shell-casting interval	700-730 C

Technological characteristics

Characteristic	Source rating
Castability	Average
Weldability	Average
Polishing	Sufficient
Machining workability	Good
Corrosion resistance	Bad
Hot ultimate tensile strength	Sufficient
Hot mechanical strength	Sufficient
Pressure tightness	Sufficient
Decorative anodizing indication	Good

International comparison

The source sheet cross-references the alloy against UNI, DIN 1725/5-86, NF A57-105, BS 1490-88, ASTM B179-18, ISO 3522-84 and JIS H2211-92 systems, and lists equivalents including UNI 220/1, AU5GT and 204.2 / AlCu4MgTi.

Handling and safety summary

- Solid ingots are intended for remelting/recasting; keep material dry before charging a molten bath.
- Main practical risks are cuts during handling, burns from hot metal, and explosion risk if wet material is introduced into molten aluminium.
- For molten-metal incidents, use suitable Class D dry extinguishing media; water, foam and CO2 should not be used on molten aluminium.
- Use appropriate PPE for hot-metal handling, including heat-resistant gloves, protective footwear, face/eye protection and protective clothing.
- This summary is informational only and does not replace a manufacturer SDS, workplace risk assessment, or local regulatory requirements.

SOURCE BASIS: Technical and Safety Data Sheet for EN AB 21000 / AlCu4MgTi, UNI EN 1676:2020. This neutral document removes supplier branding and supplier-specific contact / legal statements. It is not a manufacturer SDS, Certificate of Analysis, MTC or conformity certificate.