

Aluminium alloy EN AB-47000

Chemical designation:

EN AB-AlSi12(Cu)

Swedish standard:

Type 4260, [1], [2]

Chemical composition¹:

	Min %	Max %
Si	10,5	13,5
Fe	-	0,7
Cu	-	0,9
Mn	0,05	0,55
Mg	-	0,35
Cr	-	0,10
Ni	-	0,30
Zn	-	0,55
Pb	-	0,20
Sn	-	0,10
Ti	-	0,15

Others each max 0,05%
and total max 0,25%

General description of properties:

Eutectic alloy with excellent castability properties, excellent fluidity and high resistance to hot tearing. Good machinability and excellent weldability.

Suitable applications:

For complicated thin-wall, pressure-tight castings subjected to fatigue loading, but with corrosion resistance and toughness limitations.

Heat treatment:

Not age hardenable

Casting characteristics, S-Sand cast, K-Chill cast²:

Solidification range, °C, about	Casting temperature °C, about	Fluidity	Resistance to hot tearing	Shrinkage %, about	Pressure tightness
580-530	680-750	Excellent	Excellent	S: 1-1,1 K: 0,8-1	Excellent

Mechanical properties of separately untreated cast test bars²:

Tensile strength, R _m , MPa, min.	Proof stress R _{p0,2} , MPa, min.	Elongation A ₅₀ , %, min.	Brinell hardness HBS, min.
S: 150 K: 170	S: 80 K: 90	S: 1 K: 2	S: 50 K: 55

Mechanical and physical properties²:

Density kg/dm ³	Strength	Machinability	Weldability	Resistance to corrosion
2,65	Poor	Satisfact.	Excellent	Satisfact.
Decorative anodizing	Ability to be polished	Linear thermal expansion 293-373°K, °K ⁻¹	Electrical conductivity MS/m	Thermal conductivity W/m°K
Not recom.	Satisfact.	20 x 10 ⁻⁶	16 – 22	130 - 150