

Aluminium alloy EN AB-47100

Chemical designation:

EN AB- AlSi12Cu1(Fe)

Swedish standard:

Type -, [1], [2]

Chemical composition¹:

	Min %	Max %
Si	10,5	13,5
Fe	0,6	1,1
Cu	0,7	1,2
Mn	-	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.

Suitable applications:

For complicated thin-wall, pressure-tight casting that are subjected to fatigue loading.

Heat treatment:

Not usually age hardened

Casting characteristics²:

Solidification range, °C, about	Casting temperature °C, about	Fluidity	Resistance to hot tearing	Shrinkage %, about	Pressure tightness
580-530	650-700	Excellent	Excellent	0,5-0,8	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.
240	140	1	70

Mechanical and physical properties²:

Density kg/dm^3	Strength	Machinability	Weldability	Resistance to corrosion
2,65	Good	Satisfact.	Poor	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.	20×10^{-6}	15 – 20	120 - 150