

# Aluminium alloy EN AB-47100

Chemical designation:

EN AB-AlSi12Cu1(Fe)

Swedish standard:

Type -, [1], [2]

## Chemical composition<sup>1</sup>:

	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	-	0,094
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 characteristics<sup>2</sup>:

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 bars<sup>2</sup>:

Tensile strength, R <sub>m</sub> , MPa, min.	Proof stress R <sub>p0,2</sub> , MPa, min.	Elongation A <sub>50</sub> , %, min.	Brinell hardness HBS, min.
240	140	1	70

## Mechanical and physical properties<sup>2</sup>:

Density kg/dm <sup>3</sup>	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 <sup>-1</sup>	Electrical conductivity MS/m	Thermal conductivity W/m <sup>2</sup> K
Not recom.	Satisfact.	20 x 10 <sup>-6</sup>	15 - 20	120 - 150