

# Aluminium alloy EN AB-46000

Chemical designation:

EN AB- $\text{AlSi9Cu3(Fe)}$

Swedish standard:

Type 4250, [1], [2]

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

	Min %	Max %
Si	8,0	11,0
Fe	0,6	1,1
Cu	2,0	4,0
Mn	-	0,55
Mg	0,15	0,55
Cr	-	0,15
Ni	-	0,55
Zn	-	1,2
Pb	-	0,35
Sn	-	0,15
Ti	-	0,20

Others each max 0,05%

and total max 0,25%

### General description of properties:

Universal alloy with very good castability, particularly suitable for pressure die casting. Little tendency towards forming surface and internal cavities caused by shrinkage on solidification. Good machinability.

### Suitable applications:

For wide range of applications. Also for complicated and thin-wall castings. Especially suitable for highly stressed pressure die castings.

### 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
600-490	650-700	Good	Good	0,5-0,8	Good

## Mechanical properties of separately untreated cast test bars<sup>2</sup>:

Tensile strength, $R_m$ , MPa, min.	Proof stress $R_{p0,2}$ , MPa, min.	Elongation $A_{50}$ , %, min.	Brinell hardness HBS, min.
240	140	<1	80

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

Density $\text{kg/dm}^3$	Strength	Machinability	Weldability	Resistance to corrosion
2,75	Good	Good	Poor	Poor

Decorative anodizing	Ability to be polished	Linear thermal expansion 293-373°K, °K <sup>-1</sup>	Electrical conductivity MS/m	Thermal conductivity W/m°K
Not recom.	Satisfact.	$21 \times 10^{-6}$	13 – 17	110 - 120