

Aluminium alloy EN AB-46500

Chemical designation:

EN AB- AlSi9Cu3(Fe)(Zn)

Swedish standard:

Type 4252, [1], [2]

Chemical composition¹:

	Min %	Max %
Si	8,0	11,0
Fe	0,6	1,2
Cu	2,0	4,0
Mn	-	0,55
Mg	0,15	0,55
Cr	-	0,15
Ni	-	0,55
Zn	-	3,0
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 defects and internal cavities by shrinkage on solidification. Very 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 characteristics²:

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 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	80

Mechanical and physical properties²:

Density 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 ⁻¹	Electrical conductivity MS/m	Thermal conductivity W/m°K
Not recom.	Satisfact.	21×10^{-6}	13 – 17	110 - 120