

Aluminium alloy EN AB-44200

Chemical designation:

EN AB- AlSi12(a)

Swedish standard:

Type 4261, [1], [2]

Chemical composition¹:

	Min %	Max %
Si	10,5	13,5
Fe	-	0,40
Cu	-	0,03
Mn	-	0,35
Mg	-	-
Cr	-	-
Ni	-	-
Zn	-	0,10
Pb	-	-
Sn	-	-
Ti	-	0,15

Others each max 0,05%
and total max 0,15%

General description of properties:

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

Suitable applications:

For complicated thin-wall, pressure-tight, castings subjected to fatigue loading. Good elongation and very good corrosion resistance

Heat treatment:

Can not be artificially aged. Annealed at 520-530°C for 3-5 hours, followed by quenching in water.

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
580-570	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: 70 K: 80	S: 5 K: 6	S: 50 K: 55

Mechanical and physical properties²:

Density kg/dm^3	Strength	Machinability	Weldability	Resistance to corrosion
2,65	Poor	Satisfact.	Excellent	Good
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.	Poor	20×10^{-6}	17 - 24	140 - 170