

# Aluminium alloy EN AB-44300

Chemical designation:

EN AB- $\text{AlSi12(Fe)}$

Swedish standard:

Type 4263, [1], [2]

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

	Min %	Max %
Si	10,5	13,5
Fe	0,45	0,9
Cu	-	0,08
Mn	-	0,55
Mg	-	- <sup>1)</sup>
Cr	-	- <sup>1)</sup>
Ni	-	- <sup>1)</sup>
Zn	-	0,15
Pb	-	- <sup>1)</sup>
Sn	-	- <sup>1)</sup>
Ti	-	0,15

<sup>1)</sup> Each of these 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 and high resistance to chemical attack.

## Suitable applications:

For complicated, thin-wall, pressure-tight, corrosion-resistant castings subjected to fatigue loading. Particularly suitable for difficult thin-wall castings with good elongation properties.

## Heat treatment:

Not age hardenable

## Casting characteristics<sup>2</sup>:

Solidification range, °C, about	Casting temperature °C, about	Fluidity	Resistance to hot tearing	Shrinkage %, about	Pressure tightness
580-570	650-700	Excellent	Excellent	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	130	1	60

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

Density $\text{kg/dm}^3$	Strength	Machinability	Weldability	Resistance to corrosion
2,65	Good	Satisfact.	Poor	Satisfact.

Decorative anodizing	Ability to be polished	Linear thermal expansion 293-373°K, $^{\circ}\text{K}^{-1}$	Electrical conductivity MS/m	Thermal conductivity $\text{W/m}^2\text{K}$
Not recom.	Poor	$20 \times 10^{-6}$	16 - 22	130 - 160