

# Aluminum alloys



## Category:

high strength, high modulus  
elevated temperature

## Aluminum-alloy Al-7SiC15, A356-SiC15

Aluminum alloy Al-7SiC15 and A356-SiC15 are high strength Aluminum alloys processed via spray forming. This special spray forming process was tailor made to make large parts up to 3.500 mm diameter. It is possible to produce large billets and rings with very uniform particle distribution and homogenous microstructure. The mechanical properties are excellent. The particle content could be changed from 0-30%

### General properties

- High strength
- Excellent temperature stability
- High fatigue strength

### Comparison with Standard alloys A7075, A356

- Advantages:**
- Higher strength
  - High temp. prop.
- Disadvantages:**
- Machining more difficult

**Chemical Composition:** A7075+15%SiC, A356+15%SiC

### Mechanical properties

	<b>UTS</b>	<b>YS</b>	<b>Elong.</b>	<b>E-Modulus</b>	<b>CTE</b>
	MPa	MPa	%	GPa	ppm
<b>Al-7SiC15</b>	680	570	4,0	100	17,2
<b>Al-A356-SiC15</b>	400	320	9,0	102	16,1

### Applications

- Fan cases
- Automotive structural parts
- Airframe application
- Landing gear application
- Wear resistant application

### Delivery form

- Billets, Rings, Plates, Bars, Extrusions