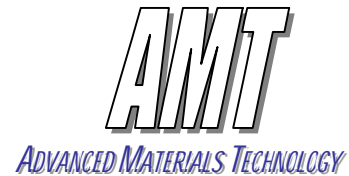


Aluminum alloys

Category:

High strength
High modulus
Good wear resistance



Aluminum-Silicon alloy Al-SF25

Aluminum alloy Al-SF25 is an Aluminum alloy processed via Spray forming. It shows high strength up to high temperatures. Good fatigue strength and excellent tribological behaviour. The modulus is significantly higher than for conventional Aluminum alloys. Excellent machining behaviour is another feature of this alloy.

General properties

- High strength
- Higher modulus than standard alloys
- Same density than standard alloys
- Excellent machining behavior
- High fatigue at elevated temperatures

Comparison with Standard alloys A4032, Al-Si12Mg

- | | |
|-----------------------|---|
| Advantages: | - 23% higher stiffness, A4032
- 20% higher fatigue |
| Disadvantages: | - Lower ductility |

Chemical Composition: AlSi17Fe5Cu4Mg

Mechanical properties, Physical data

Density:	2.81 g/cm ³
CTE:	17 x 10 ⁻⁶
Tensile strength (20°C):	530 MPa
Yield strength (20°C):	460 MPa
Fatigue, R=-1, 200°C:	177 MPa (Rotating Bending)
Elastic Modulus:	98 GPa
Elongation:	1.2 %
Hardness (HV30):	210
Thermal conductivity:	120 W/mK

Applications

- Pistons
- Oil pump gears
- Structural parts
- Valve retainers
- Connecting rods
- Hydraulic valve blocs

Delivery form

- Bars
- Billets up to 120 mm dia.
- Plates
- Extrusions