

Chemical designation: AlSi3,5Mg0,6Fe0,5

Designation: Rheocool

ALUMINIUM ALLOY RHEOCOOL

RHEOCOOL

The alloy is developed for 5G and EV's where the high thermal conductivity is required. The higher the thermal conductivity gets the lesser material is to be used due to reduction of fin height in the designs.

Typical applications: heat sinks, AC/DC converters and electronic housings.

CHEMICAL COMPOSITION:

Element	Min %	Max %
Si	1,8	4,6
Fe	0,4	1,0
Cu	-	0,15
Mn	-	0,15
Mg	0,2	0,6
Cr	-	0,1
Ni	-	0,1
Zn	-	0,05
Pb	-	0,094
Sn	-	0,25
Ti	-	0,05
Sr	-	0,05

Others each max 0,05 %
and total max 0,25 %

GENERAL DESCRIPTION

The alloy is developed for 5G and EV's where the high thermal conductivity is required. The higher the thermal conductivity gets the lesser material is to be used due to reduction of fin height in the designs.

Suitable applications:

Typical applications: heat sinks, AC/DC converters and electronic housings.

Heat treatment:

Heat treatment is made at an temperature of 300 C during two hours.

AS CAST:

Tensile strength R_m , MPa.	Yield strength $R_{p0,2}$, MPa.	Elongation A %.	Thermal conductivity W/m ² K
170-210	70-110	5,5-12,5	165-175*

HEAT TREATMENT*:

150-170	80-100	6,5-9	181-192*
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*Heat conductivity at 100 C.