

ALSi12 ALUMINUM ALLOY

GENERAL INFORMATION

ALUMINUM IS ONE OF THE LIGHTEST METAL IN THE WORLD. IS COMMONLY USED FOR THIN AND COMPLEX GEOMETRIES. IT HAS GOOD MECHANICAL PROPERTIES AND HARDNESS, AND IS SUITABLE FOR APPLICATION THAT REQUIRE LIGHTWEIGHT COMPONENTS WITH GOOD THERMAL PROPERTIES. ALMOST ANY INDUSTRIAL FIELD CAN BENEFIT FROM ALUMINUM PROPERTIES.

DENSITY 2.7 KG/DM³



BIO-COMPATIBILITY LOW



MACHINABILITY EXCELLENT



WELDABILITY VERY GOOD



CORROSION RESISTANCE FAIR



CHEMICAL COMPOSITION (ACCORDING ASTM E1251-11)

AL	SI	FE	CU	MN	MG	TI	ZN
BALANCE	12%	<0.2%	<0.1%	<0.05%	0.05%	<0.05%	<0.1%

MECHANICAL PROPERTIES

YIELD STRENGTH ¹	UP TO 330 MPA
TENSILE STRENGTH ¹	UP TO 470 MPA
ELONGATION A ¹	6 %
YOUNG'S MODULUS ¹	71 GPa
HARDNESS ²	137 HV
RELATIVE DENSITY ³	OVER 99.5 %

¹ TESTED ACCORDING TO EN 6892-1:2009

² MEASURED ACCORDING TO EN ISO 6507-1

³ MEASURED ACCORDING TO ASTM E1245

SURFACE QUALITY

RA	7 μM
----	------

MEASURED IN COMPLIANCE WITH ISO 4287-1997. RESULTS STRONGLY DEPEND ON SAMPLE GEOMETRICAL COMPLEXITY AND ORIENTATION

NOTES

ALL THE VALUES IN THIS DOCUMENT REFER TO A COMBINATION OF GEOMETRIES, POWDERS AND PARAMETERS DEVELOPED BY SISMA, THEREFORE THEY MUST BE INTENDED FOR INFORMATION ONLY. INFORMATIONS WRITTEN IN THIS FORM ARE SUBJECTED TO SUDDEN MODIFICATION WITHOUT PRIOR NOTICE, AND DO NOT GRANT FINAL RESULT.