

## INCONEL IN 718-A

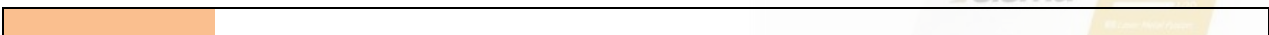
### GENERAL INFORMATION

THIS NICKEL ALLOY FEATURES MANY OUTSTANDING PROPERTIES: HIGH MECHANICAL STRENGTH, CORROSION RESISTANCE AND WELDABILITY ARE ONLY A FEW OF THEM. IT CAN BE EASILY MACHINED WHILE ANNEALED, AND DIFFERENT HEAT TREATMENTS CAN BE APPLIED TO OBTAIN A WIDE VARIETY OF QUALITIES. ITS EXTREMELY GOOD BEHAVIOR AT HIGH AND LOW TEMPERATURE MAKE IN 718-A PERFECT FOR GAS TURBINE COMPONENTS, ROCKET TECHNOLOGY AND CRYOGENIC TANKAGES.

DENSITY 8.22 KG/DM<sup>3</sup>



BIO-COMPATIBILITY LOW



MACHINABILITY VERY GOOD



WELDABILITY EXCELLENT



CORROSION RESISTANCE EXCELLENT



## CHEMICAL COMPOSITION (ACCORDING TO ASTM E2594-09)

NI	CR	NB + TA	MO	TI	AL	Co	CU
50 – 55 %	17 – 21 %	4.75 – 5.5 %	2.8 – 3.3 %	0.6 – 1.15 %	0.2 – 0.8 %	< 0.1 %	< 0.3 %

## MECHANICAL PROPERTIES

	AS BUILT	HT AMS5662	HT AMS5664
YIELD STRENGTH <sup>1</sup>	630 MPA	1185 MPA	1135 MPA
TENSILE STRENGTH <sup>1</sup>	965 MPA	1380 MPA	1315 MPA
ELONGATION A <sup>1</sup>	25 %	13 %	18 %
YOUNG'S MODULUS <sup>1</sup>	155 GPa	210 GPa	240 MPA
HARDNESS <sup>2</sup>	31.3 HRC	47.7 GPa	44.7 GPa
RELATIVE DENSITY <sup>3</sup>	OVER 99.5 %	OVER 99.5 %	OVER 99.5 %

<sup>1</sup> TESTED ACCORDING TO EN 6892-1:2009

<sup>2</sup> MEASURED ACCORDING TO EN ISO 6507-1

<sup>3</sup> MEASURED ACCORDING TO ASTM E1245

## SURFACE QUALITY

RA	20 ÷ 30 μM
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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.