

# Data Sheet: Inconel 718

## Alternative Designations

Standard	Din	ASTM	UNS	JIS	SIS	UNE
Designation	2.4668	B637	NO7718	-	-	-

## Details

This is a nickel-chromium based high strength super alloy. It is resistant to corrosion, extreme pressure and elevated temperatures of up to 700°C. It has a tensile strength of 1035MPa. However, it is brittle and difficult to weld but has good machinability with a hard cutting tool. It is widely applied in manufacturing, military equipment and aerospace industry.

## Key Features

High strength • Good machinability • Resistant to corrosion

## Chemical Composition

Element	C	Mn	P	S	Si	Cr	Ni	M	Ti	AL	Fe
Percentage	0.08	0.35	0.015	0.015	0.35	17 - 21	50 - 55	2.8 - 3.3	0.65	0.2	Rest

## Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	550	965	30	266

## Physical Properties

Property	Value
Density [g/cm <sup>3</sup> ]	<b>8.192</b>
Module of elasticity [GPa]	<b>200</b>
Electrical conductivity [m/Ω · mm <sup>2</sup> ]	<b>1.38</b>
Coefficient of thermal expansion [K <sup>-1</sup> · 10 <sup>-6</sup> ]	<b>13</b>
Thermal conductivity [W/m · K]	<b>11.2</b>
Specific heat capacity [J/kg · K]	<b>435</b>

## Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit [Materialdatacenter.com](https://www.materialdatacenter.com) for further information on this material.