Ualloy718C（Alloy 718）

Inconel 718C refers to IN718C belongs to nickel based alloy.
The body-centered square γ "phase is the main strengthening phase, and the face-centered cubic γ" phase is the auxiliary strengthening phase. It has high strength, plasticity and excellent corrosion resistance in a wide medium and low temperature range from-253 to 700℃(-487℉-1292℉).

Alloy Inconel718C| IN718C Material Chemical Composition

	Ni	Fe	Mn	C	Si	S	Cr	Al	Ti	Nb+Ta	Mo	P	Co	B	Pb	Sn	Sb	Zr	As	Bi
Min	50	Balance		0.02			17	0.3	0.65	4.4	2.8									
Max	55		0.35	0.08	0.35	0.015	21	0.7	1.15	5.4	3.3	0.015	1	0.006	0.001	0.002	0.001	0.05	0.005	0.0001

Alloy Inconel718C| IN718C Material Properties

Grade	Density	Melting Point	Mechanical Properties							
			Tensile strength	Yield Strength	Elongation	Reduction of area	Temperature	Stress	Min Hours	Elongation
Inconel718C| IN718C	8.22	1243-1359℃ 2270-2478℉	825Mpa 120Ksi	640Mpa 93Ksi	5	8	650℃ 1202℉	620Mpa 90Ksi	≥23	≥3

Alloy Inconel718C| IN718C Applications

Aircraft engine diffuser casing, bearing ring
Aircraft engine casings

Web: Ualloy.com
Tel: 86-0571-63255636
Fax: 86-0571-63256181
E: sales@ualloy.com

Information presentation property of Ualloy

Aircraft engine turbopump body

Alloy Inconel718C| IN718C Heat Treatment

1050℃ （1922℉）， 1-2h, air cool or faster;
955℃ （1751℉）， 1h, air cool;
720℃ （1328℉）， 8h;
Furnace cooling rate at 56℃/h to 620℃ （1148℉）， holding 8h, air cool.

Alloy Inconel718C| IN718C Thermal Conductivity

θ/℃	200	300	400	500	600	700	800
W/(m·℃)	13.30	14.96	16.68	18.40	19.99	21.33	22.29

Alloy Inconel718C| IN718C Coefficient of Thermal Expansion

θ/℃	25-100	25-200	25-300	25-400	25-500	25-600	25-700	25-800
α	13..2	13.7	14.0	14.4	14.8	15.2	15.8	16.8

Alloy Inconel718C| IN718C Modulus of Elasticity

θ/℃	16	100	200	300	400	500	600	700
E/GPa	186	181	176	170	164	159	153	146

Incoloy is a trademark of high-performance nickel-based alloys developed by Special Metals Corporation.
Inconel is a trademark of high-performance nickel-based alloys developed by Special Metals Corporation.

Web: Ualloy.com
Tel: 86-0571-63255636
Fax: 86-0571-63256181
E: sales@ualloy.com

Information presentation property of Ualloy