High performance

IMPHY 286

IIMPHY 286 is a precipitation hardenable stainless steel which shows:

- Very high strength properties and creep resistance at temperature to about 700°C after aging treatment due to Ti additions.
- Especial resistance to pitting and crevice corrosion.
- Excellent fatigue strength and stress-corrosion cracking resistance to chloride ions.
- Outstanding resistance to intergranular corrosion due to sensitization.
- Good resistance to oxidation and scaling at high temperature.

Chemical composition

	C	Ni	Cr	Mo	Mn	Ti	Al	V	B	Fe
Mini		24	13.5	1	1.25	1.9		0.1	0.003	Bal
Maxi	0.08	27	16	1.5	2	2.35	0.35	0.5	0.01	

International standards

UNS S66286 – WNr 1.4980 – ASTM A453 – AMS 5731

Typical applications

IMPHY 286 is recommended for any application at high temperature when a high mechanical behaviour is required as fasteners or springs in automotive industry.

Mechanical properties

Conditions	Tensile strength (MPa)	Yield strength (MPa)	Elongation %
Annealed 980° C	≈ 620 MPa	≈ 250 MPa	> 30%
Annealed 980° C + Aged 720° C – 16h	≈ 1070 MPa	≈ 700 MPa	> 30%

Creep (per ASTM A453)	
Load 385 MPa	Temp. 649° C
Time ≈ 300 h	Elong. > 20 %

Creep (per AMS 5731)	
Load 483 MPa	Temp. 649° C
Time ≈ 100 h	Elong. > 15 %

Available Forms

IMPHY 286 is delivered in wire and bars

www.aperam.com
nickel.alloys@aperam.com
YouTube

Aperam Alloys Imphy
B.P. 1
Avenue Jean Jaurès
F- 58160 Imphy

Aperam Alloys Imphy