

MP35N®

Smiths Advanced Metals

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Age-Hardenable Superalloy

We stock MP35N® in round bars which we process for you, in-house.

MP35N is an age hardenable quaternary superalloy with nickel, cobalt, chromium, and molybdenum.

The alloy possesses a combination of ultra high strength, toughness and outstanding corrosion resistance. MP35N® alloy may be used in the annealed condition but can easily be work strengthened to tensile strength levels above 260 ksi (1793 MPa). The heat treatment process can raise the tensile strength by an additional 40 ksi (276 MPa).

The VIM VAR melt process provides superior cleanliness and reduces the presence of non-metallic inclusions and residual elements. MP35N® alloy provides outstanding resistance to general corrosion, stress corrosion and crevice corrosion at all strength levels. The alloy resists corrosion in chloride solutions, saltwater, hydrogen sulphide, and mineral acids (hydrochloric, nitric and sulphuric).

We stock [MP35N® bars](#) in various sizes which we process in-house to exact lengths for immediate supply.



Grades / Specifications

- AMS5758
- AMS5844
- AMS5845
- NACE MR01-75

Benefits

- High strength marine components
- Medical implants
- Pump shafts
- Aerospace components

Chemical Composition (weight %)

	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	Fe	Co	
min.						19.00	33.00	9.00			Rem	
max.	0.025	0.15	0.15	0.015	0.010	21.00	37.00	10.50	1.00	1.00	Rem	

* As per AMS 5844

Mechanical Properties

	Solution Annealed MP35N	AMS 5844 aged 4 hr. @ 566°C
UTS, MPa (ksi)	896 (130)	1793 (260)
0.2% PS, MPa (ksi)	379 (55)	1586 (230)
Elongation on 4D, %	65	8
R of A, %	75	35
Hardness	90 HRB	-

www.smithsadvanced.com
info@smithsadvanced.com