

Monel

R-405

UNS N04405

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Nickel

Copper

www.arialloy.com/monel-r405/

Chemical Composition

Ni%	Cu%	Fe%	Mn%
≥ 63.0	28.0 ~ 34.0	≤ 2.5	≤ 2.0
C%	Si%	S%	
≤ 0.3	≤ 0.5	0.025 ~ 0.060	

Mechanical Properties

Product Form	Condition	T.S.	Y.S.	EL	RA	Hardness
		MPa, min	MPa, min	%, min	%, min	HR
Round Bar	≤ 12.7mm Cold Worked	585	345	8	...	...
	12.7 ~ 76.2mm Cold Worked	585	345	15	...	...
	76.2 ~ 101.6mm Cold Worked	552	345	15	...	...
Hexagon, Square & Flat	≤ 50.8mm Cold Worked	585	345	15	...	...
	50.8 ~ 79.4mm Cold Worked	552	310	15	...	...
Round Bar	≤ 76.2mm Hot Worked	517	241	30	...	...
Hexagon, Square & Flat	≤ 54mm Hot Worked	517	241	30	...	...
	54 ~ 101.6mm Hot Worked	480	207	25	...	...
All Bars	Annealed	480	170	35	...	...
Wire	Annealed	483 ~ 586	...	...	...	...
	≤ 12.7mm No. 0	552 ~ 655	...	...	...	...
	≤ 12.7mm No. 1	621 ~ 758	...	...	...	...

Physical Properties

Density		Melting Range	
lb/in ³	g/cm ³	°F	°C
0.318	8.80	2370 ~ 2460	1300 ~ 1350

Main Standards

Rod, Bar & Wire
ASTM B164/ASME SB 164 SAE AMS 4674 & 7234