



## Nickel & Nickel Alloy GradeComparison

### Chemical Composition. Mechanical Properties and Physical Constants

	Type	Ni	Cu	Fe	C	Mn	S	Si	Cr	Mg	Ti	Al	Tensile Strength N/m.m <sup>2</sup>	Yield Strength N/m.m <sup>2</sup>	Elongation %	Hardness RB	Temperature °C
Pure Nickel	Nickel 200	99.00 Min	0.25 Max	0.40 Max	0.15 Max	0.35 Ma	0.01 Max	0.10 Max	-	-	-	-	380 - 580	105 - 345	30 - 50	65 Max	700 Max
	Nickel 201	99.00 Min	0.25 Max	0.40 Max	0.02 Ma	0.35 Max	0.01 Max	0.20 Max	-	0.15 Max	0.10 Max	-	380 - 580	105 - 345	30 - 50	65 Max	700 Max
	Nickel 205	99.00 Min	0.15 Max	0.20 Max	0.15 Max	0.35 Max	0.008 Max	0.15 Max	-	0.01 - 0.08	0.01 - 0.05	-	345 Min	90 Min	25 - 45	60 Max	600 Max
	Nickel 270	99.90 Min	0.01 Max	0.05 Max	0.02 Ma	0.005 Max	0.003 Max	0.005 Max	-	0.005 Max	0.005 Max	-	345 Min	110 Min	50 Min	60 Max	700 Max
Nickel Alloy	NiChrome 80/20	Balance	0.50 Max	1.00 Max	0.15 Max	0.06 Max	0.015 Max	0.50 - 2.00	19.00 - 21.00	-	-	0.05 Max	650 Min	300 Min	25 Min	90 Max	600 Max
	INCONEL® 600	72.00 Min	0.50 Max	6.00 - 10.00	0.15 Max	1.00 Max	0.015 Max	0.50 Max	14.00 - 17.00	-	-	-	550 - 830	240 - 520	20 - 45	85 Max	1050 Max
	MONEL® 400	63.00 Min	28.00 - 34.00	2.50 Max	0.30 Max	2.00 Max	0.024 Max	0.50 Max	-	-	-	-	482 - 655	207 - 379	20 - 45	80 Max	700 Max

Note: This is a reference guide only. Please consult with a WEB product engineer prior to choosing a nickel grade.