

### Copper Base Resistance Heating Alloy

Type		NC003	NC005	NC010	NC012	MC012	NC015	NC020	NC025	NC030	NC035	NC040	NC050
Chemical Composition %	Ni	1	2	6	8	—	10	14.2	19	23	30	34	44
	Mn	—	—	—	—	3	—	0.3	0.5	0.5	1.0	1.0	1.0
	CU	Rest	Rest	Rest	Rest	Rest	Rest	Rest	Rest	Rest	Rest	Rest	Rest
Max. Working Temperature °C		—	200	220	250	200	250	300	300	300	350	350	400
Melting Point °C		1085	1090	1095	1097	1050	1100	1115	1135	1150	1170	1180	1280
Density g/cm <sup>3</sup>		8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Resistivity uΩ.m,20°C		0.03 ± 10%	0.05 ± 10%	0.10 ± 10%	0.12 ± 10%	0.12 ± 10%	0.15 ± 10%	0.20 ± 5%	0.25 ± 5%	0.30 ± 5%	0.35 ± 5%	0.40 ± 5%	0.49 ± 5%
Tensile Strength Mpa		≥210	≥220	≥250	≥270	≥290	≥290	≥310	≥340	≥350	≥400	≥400	≥420
Elongation % (>Φ1.0)		≥25	≥25	≥25	≥25	≥25	≥25	≥25	≥25	≥25	≥25	≥25	≥25
Resistance Temperature Coefficient 10 <sup>-5</sup> /°C (20-600°C)		> 100	> 120	> 60	> 57	> 38	> 50	> 38	> 25	> 16	>10	—0	> —6
Thermoelectromotive Force Against Copper u v/°C(0~100°C)		-8	-12	-18	-22	—	-25	-28	-32	-34	-37	-39	-43