

# 602 CA®

602 CA® for high pressure and extreme temperature

The most oxidation resistant and high strength nickel alloy available, 602 CA® maintains strength and oxidation resistance up to 1232°C.

## PRODUCT FORMS

PRODUCT FORM	SIZE RANGE TO	SIZE RANGE FROM
602 CA® Round bar	12.7 mm	38.1 mm
602 CA® Sheet & plate	1.6 mm	12.7 mm
602 CA® Welding wire	0.89 mm	3.125 mm

Can't find the size you need? **Please contact us at [onlinesales@neonickel.com](mailto:onlinesales@neonickel.com)**

## CHEMICAL ANALYSIS

%	NI	CR	CU	C	MN	SI	Y	FE	TI	AL	ZR
Min	Balance	24	0	0.15	0	0	0.05	8	0.1	1.8	0.01
Max	Balance	26	0.1	0.25	0.15	0.5	0.12	11	0.2	2.4	0.1

## APPLICATIONS

- Radiant tubes
- Muffles
- Furnace retorts

## ABOUT 602 CA®

602 CA® has a high creep rupture strength, providing up to 150% of the strength of other Nickel Alloys. Exposure to carbon rich gases can cause carburization. Due to its high Nickel content, 602 CA® has an outstanding resistance to carburisation, ensuring prolonged ductility in the face of carbon monoxide (CO) and methane (CH<sub>4</sub>). Performing well under high pressure and temperature, 602 CA® is extensively used in thermal processing equipment. **For more information on 602 CA® [contact us](#), or fill in our online quote form and we'll get back to you!**

**PROPERTIES**

<b>Density:</b>	7.89 g/cm <sup>3</sup>
<b>Melting Range:</b>	1340 1400°C
<b>Hardness:</b>	HRB
<b>Specific Heat Capacity:</b>	450 J/kg.°C
<b>Electrical Resistivity:</b>	1.23 μΩ.m
<b>Curie Temperature:</b>	°C

**MECHANICAL & PHYSICAL PROPERTIES**

MECHANICAL & PHYSICAL PROPERTIES	21.1°C	93.3°C	204.4°C	315.6°C	371.1°C	537.8°C	684.9°C	700°C	815°C	870°C	982°C	1093°C	1204°C
Ultimate Tensile Strength /MPa	675	650	625	600	580	560	520	420	284	226	118	90	40
0.2% Yield Strength /MPa	270	240	220	200	190	180	175	170	239	197	105	80	34
Elongation %	38	30	30	30	30	43	30	30	78	82	78	85	96
Minimum Creep 0.0001% per hr	-	-	-	-	-	-	185	132	32	16.5	6.6	2.2	-
10,000 hr Rupture Strength	-	-	-	-	-	-	-	155	42	22.1	10.3	4.6	3
Coefficient of Thermal Expansion /μm/m°C **	-	14.15	14.27	14.42	14.63	14.9	15.3	-	16	16.71	17.31	17.91	-
Thermal Conductivity /kcal/(hr.m.°C)	8.94	10.58	12.04	13.33	14.53	17.26	18.3	20.53	-	22.02	23.51	15.15	-
Modulus of Elasticity / GPa	215	209	201	197	192	189	185	-	154	137	118	102	-

**SPECIFICATIONS**

<b>UNS Number:</b>	N06025
<b>W.Nr.Number:</b>	2.4633
<b>Standards:</b>	ASTM B166, B168, B163, B167, B462, B517, B546, B564, B366