

Shenzhen HuaNickel Special Alloy Co., Ltd.

HuaNickel Alloy602CA

Content

1	Chemical composition
2	Physical properties
3	Mechanical properties
4	Fields of application
5	Process performance
6	Contact

Inconel 602CA is a nickel-based alloy with a high carbon content, mainly composed of elements such as nickel, chromium and iron, which has corrosion resistance and high temperature properties. This alloy has excellent resistance to creep at high temperatures and remains stable even at extreme temperatures. In addition, Inconel 602CA has good oxidation resistance.

HuaNickel Alloy602CA Chemical composition:

	C	Si	Mn	S	P	Cr	Ni	Fe	Cu	Ti	Al
Min	≤					24.0	Bal	8.0		0.1	1.8
Max		0.5	0.15	0.01	0.02	26.0		11.0	0.1	0.2	2.4

HuaNickel Alloy602CA Physical properties:

Density	8.90 g/cm ³
Melting point	1325-1370 °C

HuaNickel Alloy602CA Mechanical properties:

Tensile strength ksi [MPa]	Yield strength Ksi [MPa]	Elongation %	Brinell hardness
75 517	30 207	30	-

HuaNickel Alloy602CA Alloy properties:

Oxidation resistance: The alloy contains a high chromium content (25%) and the addition of aluminum and yttrium, which work together to improve its oxidation resistance.

Corrosion resistance: In addition to oxidation resistance, Inconel 602CA has good corrosion resistance. This makes it suitable for use in a wide range of environments containing corrosive chemicals, such as acids, alkalis, and salt solutions.

High Temperature Performance: Inconel 602CA is able to withstand extreme high temperature environments, and its creep and oxidation resistance make it excellent under high temperature cycles or cyclic load conditions.

HuaNickel Alloy602CA Uses of alloys:

Inconel 602CA is widely used in aerospace, petrochemical, energy, chemical processing and other fields. In particular, in the manufacture of aerospace structural components, propulsion systems, liquid hydrogen fuel systems, as well as various industrial furnace tubes and heat treatment equipment. Inconel 602CA alloy is also used in the petrochemical industry due to its high-temperature strength and excellent oxidation resistance, especially in environments that require high temperature and corrosion resistance.

HuaNickel Alloy602CA Process performance:

Welding process: Inconel 602CA alloy can be welded using a common welding process, but it is particularly well suited to a welding process that effectively utilizes the properties of the alloy while reducing the negative impact of impurities on its properties.

Heat treatment process: The heat treatment process of Inconel 602CA alloy includes solution treatment, that is, the alloy is heated to a temperature range of about 1150-1200° C and held for a period of time to dissolve the carbides and other phases in the alloy in the matrix, and then this process is completed by rapid cooling.

Relevant standards:

The above data are laboratory data and are for reference only

ASME Code Case 2359, ASME SB 166, ASME SB 168

ASTM B 166, ASTM B 168

ERNiCrFe-12

UNS N06025

Contact		
<p>Shenzhen HuaNickel Special Alloy Co.,Ltd. Contact: JOYS Mobile: [+86-15220239992 Tel: [+86-755-29195055 Fax: [+86-755-29829009 Email: Sales@huanickel.com https://www.cnnickel.com Whatsapp: +8615220239992</p>	 <p>Whatsapp</p>	 <p>WeChat</p>

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