



Stainless Steel GX2CrNi19-11 (EN 1.4309)

GX2CrNi19-11 is stainless steel for casting purpose; it's an Austenitic corrosion resistant casting steel.

GX2CrNi19-11 is defined in standard EN 10213 and EN 10283 and ISO 11972, the EN number is 1.4309.

GX2CrNi19-11 (EN 1.4309) is same stainless steel material as SS304L,

EN 10213: 2007 Steel castings for pressure purposes

EN 10283: 2010 Corrosion resistant steel castings

ISO 11972:2015 specifies cast steels for general corrosion-resistant applications.

X2CrNi19-11 (EN 1.4306) is the similar grade in standard of in EN 10088-3

EN 10088-3: Stainless steels

GX2CrNi18-9 (EN 1.4306) in standard of DIN 17445: 1984 STAINLESS STEEL CASTINGS - TECHNICAL DELIVERY CONDITIONS

GX2CrNi19-11 (EN 1.4309) similar grade:

American: ASTM A351 CF3 (J92500)

American: ASTM A743 CF3 (J92500)

American: ASTM A744 CF3 (J92500)

American: ASTM A297 CF3 (J92500)

Japanese: JIS 5151 SCS13

Chinese: GB/T 12230 ZG0Cr18Ni9

France: AFNOR Z6CN18.10M; Z6CN19.9M

UK: BS3100-4 304C15

Korea: KS D4103 SCS13

Germany: DIN 17445 GX6CrNi18-9

GX2CrNi19-11 (EN 1.4309) Heat treatment process: Solution annealing + water quenching (+AT)

Heat to 1050-1150°C for sufficient time to heat casting uniformly to temperature and water quench

GX2CrNi19-11 (EN 1.4309) BENEFITS

Corrosion and pitting resistance

Higher strength than standard stainless steel

Improved ductility and weldability

Better resistance to embrittlement

GX2CrNi19-11 (EN 1.4309) APPLICATION,
it's the most popular stainless steel:

Pump industry.

Machinery spare part

Automobile industry

Food industry





GX2CrNi19-11 (EN 1.4309) Chemical requirements and Mechanical Property

Standard	EN 10213	EN 10283	ISO 11972	EN 10088-3	DIN 17445
Grade	GX2CrNi19-11	GX2CrNi19-11	GX2CrNi19-11	X2CrNi19-11	GX2CrNi18-9
EN number	1.4309	1.4309	1.4309	1.4306	1.4306
Chemical requirements					
C max	0.03	0.03	0.03	0.03	0.03
Si max	1.50	1.50	1.5	1.00	1.50
Mn max	2.00	2.00	2.00	2.00	1.50
P max	0.035	0.035	0.035	0.045	0.045
S max	0.025	0.025	0.025	0.030	0.030
Cr	18.0-20.0	18.0-20.0	18.0-20.0	18.0-20.0	17.0-20.0
Mo	-	-	-	-	-
Ni	8.0-12.0	9.0-12.0	9.0-12.0	10.0-12.0	9.0-12.0
Cu	0.50	-	-	-	-
N	0.20	0.20	0.20	0.11	-
Mechanical Property					
Thickness, mm	150	150	150	160/160-250	-
Tensile Mpa,min	440-640	440	440	460-680	440-640
0.2% proof Mpa, min	-	185	185	180	175
1% proof Mpa, min	210	210	-	215	-
Elongation, %,min	30	30	30	Long 45 Tr 35	25
Impact Kv,J, min	80	80	80	Long 100 Tr 60	-
Hardness, HB, max	-	-	-	215	130-200

Mechanical properties

ReH Minimum yield strength / Mindestwert der oberen Streckgrenze / Limite d elasticite minimale

Rm Tensile strength / Zugfestigkeit / Resistance a la traction

A Minimum elongation / Mindestwert der Bruchdehnung / Allongement minimal

J Notch impact test / Kerbschlagbiegeversuch / Essai de flexion par choc

Heat treatment conditions

- +A Soft annealed
- +AC Annealed to achieve spheroidization of the carbides
- +AR As rolled
- +AT Solution annealed
- +C Cold drawn / hard



+CR	Cold rolled
+FP	Treated to ferrite-pearlite structure and hardness range
+I	Isothermal annealing
+LC	Cold drawn / soft
+M	Thermo mechanical rolling
+N	Normalized
+NT	Normalized and tempered
+P	Precipitation hardened
+PE	Peeled
+QA	Air quenched and tempered
+QL	Liquid quenched and tempered
+QT	Quenched and tempered
+S	Treated to improve shearability
+SH	As rolled and turned
+SR	Cold drawn and stress relieved
+T	Tempered
+TH	Treated to hardness range
+WW	Warm worked
+U	Untreated

SERVICE IN QINGDAO CASTING QUALITY INDUSTRIAL

- I SAND CASTING**
- I INVESTMENT CASTING**
- I SHELL CASTING**
- I PERMANENT MOLD CASTING**
- I CNC MACHINING**

As a professional casting manufacture, Qingdao Casting Quality Industrial pay much attention to the quality and technology, our products are much more casting and forging parts. We are mainly do Sand Casting, Investment Casting (Lost Wax Casting or Precision Casting) and Die Casting .Today, its products are marketed globally through many countries.

Our Services

Casting Quality focus on Metal Parts industry, we provide professional service in Metal Casting field.

1. Sand Casting
2. Investment Casting
3. Shell Casting
4. CNC Machining
5. CAD Design
6. Tools/Mold Design

Many buyers from all over the world purchase products from China. But do you know the quality of products in China? Maybe you only pay the surface and price, but the inner quality is lost.

Housing Casting Design in Solidworks

What makes Casting Quality the best?

Innovation

Our engineers are more than just designers....they're pioneers. Our team use CAD/CAM to do the simulation of casting parts .Through the advanced technology, we can know the weight and structure. We also visited so



many factories to know their difference and improve our products every year.

Quality

We're obsessed with quality. Casting Quality constantly strives to exceed our customers' expectations in durability and performance. In fact, we will control the whole process from the original material to the finished parts, include the technology. Uniquely-designed Quality Control System focuses on ensuring four product goals: 1) Eligible Chemistry, 2) Hardness 3) Property and 4) Affordable Pricing. The result is the best casting products value in the industry.

Service

We're in Qingdao, China, It has convenient transportation of road and sea. Courteous service is part of who we are, and we do it better than anyone in the industry. With Casting Quality you can expect friendly, knowledgeable, and prompt customer service.

Fulfillment

Shipping orders complete and on-time is of paramount importance to our customers. We will count the delivery date and result before accept your order. Casting Quality consistently ranks as one of the best in speed of delivery and fill rates.