Our Product Introduction



BLX

# High Temperature Alloy High Plasticity Wire GH3128 Wire In Aircraft Engine

## **Basic Information**

Place of Origin: ChinaBrand Name: Victory

• Certification: CE,ROHS,ISO 9001

Model Number: GH3128Minimum Order Quantity: 5 KgPrice: Negotiable

Packaging Details: Spool package with Carton box, Coil

package with polybag

• Delivery Time: 5-21 days

• Payment Terms: L/C, T/T, Western Union, MoneyGram

• Supply Ability: 300 tons per month



# **Product Specification**

Product Name: GH3128 Wire
 Density: 8.81 G/cm³
 Melting Point: 1340 1390°C
 Tensile Strength: 690 MPa
 Yield Strength: 270 MPa

Application: Aerospace, Petrochemical, Heat Treatment

Industry

• Highlight: High Temperature Alloy GH3128 Wire,

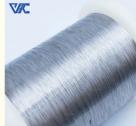
Aircraft Engine High Temperature Alloy,

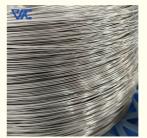
High Plasticity GH3128 Wire



# More Images









# **Product Description**

## Introduction:

GH3128 (GH128) is a nickel-based alloy solid solution reinforced with tungsten and molybdenum and grain boundaries reinforced with boron, cerium and zirconium. It has high plasticity, high lasting creep strength, good oxidation resistance and stamping, welding and other properties. Its comprehensive performance is better than similar nickel-based solid solution alloys such as GH3044 and GH3536. It is suitable for manufacturing combustion chamber flame tubes, afterburner casings, regulator plates and other high-temperature parts of aeroengines that operate at 950°C for a long time. The main products are cold-rolled sheets, and hot-rolled plates, bars, etc. can also be supplied. Forgings, wire and tubing.

#### Parameter:

Chemical Composition ( % )														
Brand	Brand C Si Mn S P Less than				Cr	Со	W	Мо	Ti	Al	Fe	Ni	other	
GH3128	0.05	0.8	0.5	0.013	0.013	19~22	_	7.5~9	7.5 9	0.4 0.8	0.4 0.8	≤2.0	rest	B≤0.005 Ce≤0.05 Zr≤0.06

The minimum mechanical properties of the alloy at room temperature											
Brand	heat treatment	tensile strength RmN/mm²	Yield strength Rp0.2N/mm2	Elongation As%	Brinell hardness HB	Rockwell hardness HRC					
GH3128	solid solution	750		40	_						

#### Thermal conductivity

θ/°C	100	200	300	400	500	600	700	800	900	950
$\lambda/(W/(m\cdot C))$	11.30	12.56	14.24	15.49	16.75	18.42	19.68	21.35	23.02	23.86

#### Linear expansion coefficient

θ/°С	18 100	18 200	18 300	18 400	18 500	18 600	18 700	18 800	18 900	18 1000
α/10-6C- 1	11.25	11.86	12.68	12.80	13.37	13.68	14.46	15.19	15.66	15.29

## **Characteristic:**

High temperature strength: GH3128 wire has excellent high temperature strength and can maintain high mechanical properties in high temperature environments.

Antioxidant properties: It exhibits good antioxidant properties and can resist oxidation and corrosion at high temperatures. Creep resistance: GH3128 wire has good creep resistance and can withstand long-term continuous loading at high temperatures without deformation.

Anti-corrosion properties: It has good anti-corrosion properties in many corrosive media, including acidic, alkaline and chloride environments.

## Specific application areas:

Aeroengine combustion chamber flame tube, afterburner housing, regulator plate Structural parts of gas turbine combustion chamber Turbine engine combustion chamber parts







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## **Process performance and requirements:**

The alloy has a single-phase austenite structure in the solid solution state and contains a small amount of fine and evenly distributed TiN and M6C.

- 1. The furnace temperature for steel ingot forging should not be higher than  $700^{\circ}$ C, and the final forging temperature should be higher than  $900^{\circ}$ C.
- 2. The average grain size of the alloy is closely related to the deformation degree and final forging temperature of the forging.
- 3. Alloys can be welded by argon arc welding, spot welding, seam welding and other methods.



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