

# Chemical Processing Industry Inconel 825 Bar With High Temperature Resistance

## **Basic Information**

| <ul> <li>Place of Origin:</li> </ul> | China  |    |
|--------------------------------------|--|----|
| Brand Name:                          | Victory  | Va |
| Certification:                       | ISO9001  |    |
| Model Number:                        | Inconel 825  |    |
| Minimum Order Quantity:              | 5 Kg   |    |
| Price:                               | Negotiable   |    |
| Packaging Details:                   | Inconel 825 bar packed in Spool Carton box,<br>Coil package with polybag,then in<br>woodencase |    |
| Delivery Time:                       | 7-20 Days  |    |
| <ul> <li>Payment Terms:</li> </ul>   | L/C, T/T, Western Union, MoneyGram   |    |
| <ul> <li>Supply Ability:</li> </ul>  | 300 tons per month   |    |
|                                      |  |    |



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## **Product Specification**

### • Name:

- Material:Ni (Min):
- Application:
- Sureface:
- Coefficient Of Expansion:
- Modulus Of Rigidity:
- Density:
- Modulus Of Elasticity:
- Melting Point:
- Tensile Strength:
- Yield Strength:
- Highlight:
- 38-46% Chemical Reactors And Tanks, Pipes And Valves Bright,Oxided 14.0 μm/m °C (20 – 100°C) 75.9 KN/mm<sup>2</sup> 8.14 G/cm3 196 KN/mm<sup>2</sup>

Inconel 825 Bar

Ni Fe Cr Mo

- 1400°C
- 550 MPa
- 220 MPa
  - corrosion resistant inconel alloy, high temperature resistant inconel alloy



## More Images



#### Introduction:

Inconel 825 rod is a commonly used highly corrosion-resistant alloy material in the chemical processing industry. It is a nickeliron-chromium alloy with excellent corrosion resistance and is particularly suitable for corrosive media and high-temperature environments in the chemical processing industry.

In the chemical processing industry, Inconel 825 rod is widely used to manufacture corrosion-resistant equipment and components. It is commonly used in the manufacture of key equipment such as chemical reactors, distillation columns, storage tanks, pipes and valves. Due to its excellent corrosion resistance, Inconel 825 rods can withstand various corrosive media, including acids, alkalis, salts and oxides, ensuring long-term reliable operation of chemical equipment in harsh working environments.

Overall, Inconel 825 rod plays an important role in the chemical processing industry due to its excellent corrosion resistance, high temperature strength and chemical stability. It is widely used in key components such as chemical equipment, heat treatment equipment and catalysts to ensure the reliability, safety and efficiency of chemical processing processes. The wide range of applications and excellent performance of Inconel 825 rod make it one of the indispensable materials in the chemical processing industry.

#### **Characteristic:**

Corrosion resistance: Inconel 825 rod has excellent corrosion resistance and can resist the erosion of acidic, alkaline, oxidizing and reducing media, including sulfuric acid, hydrochloric acid, nitric acid, chloride, etc.

Oxidation resistance: The alloy has good oxidation resistance and is able to maintain its structural integrity and mechanical properties under high temperatures and oxidizing environments.

Resistance to stress corrosion cracking: Inconel 825 bar has a high resistance to stress corrosion cracking and is suitable for environments subject to a combination of stress and corrosion.

Good processability: The alloy can be hot and cold processed, making it easy to manufacture parts of various complex shapes.

#### Advantage:

Good corrosion resistance: Inconel 825 rod has excellent corrosion resistance and can withstand a variety of corrosive media in the chemical processing industry, including acidic and alkaline solutions, and has a long service life.

Oxidation and high temperature resistance: The alloy performs well in high temperature and oxidizing environments, making it suitable for applications such as high temperature chemical reactors, furnace tubes and burners.

Good mechanical properties: Inconel 825 rod has good strength and ductility, as well as high hardness and fatigue resistance, making it suitable for withstanding high stress and impact loads in the chemical processing industry.

Reliability: The alloy has a stable chemical composition and structure that provides the high reliability and safety required by the chemical processing industry.

## **Application:**

Chemical Reactors and Tanks: Inconel 825 rod can be used to manufacture equipment such as chemical reactors and tanks, such as acid solution storage tanks, sulfide processing equipment and oxidizer storage tanks. Its corrosion resistance and high temperature resistance make it suitable for the manufacture of equipment that handles a variety of chemical media.

Pipe and Valves: The alloy is used to make pipe and valve components in the chemical industry, such as pipes carrying acidic solutions, chemical regulating valves, and fluid control valves. Its corrosion resistance and high temperature resistance allow it to remain stable in corrosive media and high temperature environments.

Distillation towers and absorption towers: Inconel 825 rods can be used to manufacture equipment such as distillation towers and absorption towers in the chemical processing industry, such as sulfuric acid distillation towers and oxidant absorption towers. Its corrosion resistance and resistance to stress corrosion cracking make it suitable for the manufacture of equipment subject to a combination of corrosion and stress.

Acid gas treatment equipment: The alloy can be used to manufacture equipment that handles acid gases, such as hydrofluoric acid evaporators, sulfuric acid atomizers, and hydrogen chloride treatment equipment. Its corrosion and oxidation resistance make it stable in high temperatures and acidic gas environments.

#### Other relevant knowledge points:

Inconel 825 is a nickel-iron-chromium alloy containing elements such as copper, molybdenum and titanium. The addition of these elements improves the corrosion resistance and mechanical properties of the alloy.

The alloy has good welding properties and can be connected using conventional welding methods.

In the chemical processing industry, selecting the right materials is key and factors such as the corrosive nature of the medium, operating temperature and pressure need to be considered to ensure equipment performance and safety.

Standard specifications of Inconel 825 rods can be customized to specific needs, with common diameters and lengths available as per project requirements.

#### **Parameter:**

| Chemical Composition (%) |       |       |       |          |          |           |           |      |       |         |
|--------------------------|-------|-------|-------|----------|----------|-----------|-----------|------|-------|---------|
| С                        | Si    | Mn    | S     | Мо       | Ti       | Cr        | Ni        | Al   | Fe    | Cu      |
| ≤0.05                    | ≤0.50 | ≤1.00 | ≤0.03 | ≤2.5~3.5 | ≤0.6~1.2 | 19.5~23.5 | 38.0~46.0 | ≤0.2 | ≥22.0 | 1.5~3.0 |

| Standard                   |                |   |  |  |  |  |  |  |
|----------------------------|----------------|---|--|--|--|--|--|--|
| Sheet/Plate                | Round bar/Wire | Pipe  | Tube   |  |  |  |  |  |
| ASME SB-424<br>ASME SB-906 | ASME SB-425    | ASME SB-423<br>ASME SB-829<br>ASME SB-163<br>ASME SB-751<br>ASME SB-775 | ASME SB-704<br>ASME SB-705<br>ASME SB-751<br>ASME SB-775 |  |  |  |  |  |

## contact us email:victory@dlx-alloy.com

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### Q & A:

Q1: What quality control measures are implemented for Inconel 825 bars? A1: We implement stringent quality control measures, including material testing and dimensional inspections, to ensure the high quality of our Inconel 825 bars.

Q2: Can you provide certifications to validate the quality of your Inconel 825 bars? A2: Yes, we provide certifications, such as certificates of compliance and material test reports, to validate the quality and traceability of our Inconel 825 bars.

