INCONEL ALLOY 625

UNS Number N06625

Other common names: Alloy 625

Inconel 625 is a corrosion and oxidation resistant nickel alloy that is used both for its high strength and outstanding aqueous corrosion resistance. Its outstanding strength and toughness is due to the addition of niobium which acts with the molybdenum to stiffen the alloy's matrix. Alloy 625 has excellent fatigue strength and stress-corrosion cracking resistance to chloride ions. This nickel alloy has excellent weldability and is frequently used to weld AL-6XN. This alloy resists a wide range of severely corrosive environments and is especially resistant to pitting and crevice corrosion. Some typical applications Inconel 625 is used in are chemical processing, aerospace and marine engineering, pollution-control equipment, and nuclear reactors.

In what form is Inconel 625 available?

- Sheet
- Plate
- Bar
- Pipe & Tube (welded & seamless)
- Wire

What are the characteristics of Inconel 625?

- High creep-rupture strength
- Oxidation resistant to 1800° F
- Seawater pitting and crevice corrosion resistant
- Immune to chloride ion stress corrosion cracking
- Non-magnetic

Chemical Composition, %

<table>
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<tr>
<th></th>
<th>Cr</th>
<th>Ni</th>
<th>Mo</th>
<th>Co + Nb</th>
<th>Ta</th>
<th>Al</th>
<th>Ti</th>
<th>C</th>
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<tbody>
<tr>
<td></td>
<td>20.00-30.00</td>
<td>Remainder</td>
<td>8.0-10.0</td>
<td>1.0 max</td>
<td>3.15-4.15</td>
<td>.40 max</td>
<td>.40 max</td>
<td>.10 max</td>
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<tr>
<td>Fe</td>
<td>5.0 max</td>
<td>.50 max</td>
<td>.50 max</td>
<td>.015 max</td>
<td>.015 max</td>
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