409
Ferritic Grade

DESCRIPTION:
Grade 409 is a stabilized ferritic stainless steel. It is stabilized by titanium and chromium, with the 11% chromium being the minimum amount needed for the passive surface that gives stainless steel its corrosion resistance. 409 stainless is primarily used for applications where oxidation and corrosion protection needs to exceed that of carbon steel. Grade 409 provides medium strength, good formability, and weldability but it does not have a uniform surface appearance. Because of this, it is generally used for applications where surface finish is not critical like automotive exhaust systems.

APPLICATIONS:
- Automotive Exhaust Systems
- Power Generation
- Furnace and Heat Exchangers
- Agriculture Equipment

CHEMICAL COMPOSITION:

<table>
<thead>
<tr>
<th>Element</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>0.03 max</td>
</tr>
<tr>
<td>Chromium</td>
<td>10.5 – 11.7</td>
</tr>
<tr>
<td>Nickel</td>
<td>0.5 max</td>
</tr>
<tr>
<td>Titanium</td>
<td>0.48 – 0.75</td>
</tr>
<tr>
<td>Manganese</td>
<td>1.0 max</td>
</tr>
<tr>
<td>Silicon</td>
<td>1.0 max</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>0.04 max</td>
</tr>
</tbody>
</table>

MECHANICAL PROPERTIES:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield Strength</td>
<td>25 KSI min</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>55 KSI min</td>
</tr>
<tr>
<td>Elongation</td>
<td>25%</td>
</tr>
<tr>
<td>Hardness</td>
<td>88 Rockwell B</td>
</tr>
</tbody>
</table>

Disclaimer:
The information on the stainless alloy data sheets are accurate to the best of our knowledge, but are intended for general information only. Applications suggested for the different alloys are listed only to help our customers make their own decisions. These are neither guarantees nor warranties on material uses. Data referring to chemical composition and mechanical properties are industry norms at the typical state of the alloys tested. These properties can change in different environments, temperatures, applications and so forth. Stainless Structurals assumes no responsibility or liability for the information given.