Type 304L Stainless Steel

1.Stainless Steel Plate

Type 304 | Type 304L | Type 304H | Type 316 | Type 316L | Type 316H | Type 321 | Type 347

Type 410 | UNS S32205 Duplex | UNS S32750 SuperDuplex | UNS S32760 SuperDuplex

2.A lower carbon variant of Type 304, Grade 304L is used in applications where higher corrosion resistance is required. Type 304L is a lower carbon variant of Grade 304 – the steel can be welded without the resulting issue of carbon precipitation (precipitation of chromium carbide as heat is applied during the welding process which depletes the chromium element of the steel thus reducing its anti-corrosive/oxidation effectiveness).

3.As a result, Type 304L stainless steel is a sort after material for use in severely corrosive conditions. Weld annealing is only necessary in applications where stress loads are excessive.

4.This steel Grade is found in a variety of commercial sectors, particularly in the chemical industry.

Benefits of using 304L Stainless Steel

5.Low carbon content eliminates carbon precipitation in the welding process

Can be used in severe corrosive environments

Weld annealing only required in high stress applications

Very similar to Type 304

6.304 & 304L plate and pipes have similar properties and in certain cases are stocked with Dual Certification, where it is concluded that each item has properties and a composition which comply with both steel types. Grade 304H cannot be included in this equation due to the steel's higher carbon content which is intended for use in elevated temperature applications.

7.Chemical Composition

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| UNS No | Grade | C | Si | Mn | P | S | Cr | Mo | Ni | N |
| S30403 | 304L | 0.030 | 0.75 | 2.00 | 0.045 | 0.030 | 18.00/20.00 | – | 8.00/12.00 | 0.10 |

8.Mechanical Properties

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| UNS No | Grade | Proof Stress 0.2% (MPa) | Tensile Strength (MPa) | Elongation A5(%) | Hardness Max | |
| HB | HRB |
| S30403 | 304L | 170 | 485 | 40 | 201 | 92 |

9.We stock 304L stainless steel and can globally supply this material to you – to find out more or to receive a competitive quotation please contact us.