

Duplex Stainless Steel

Duplex stainless steel offers improved resistance to stress corrosion cracking

Duplex stainless steel stockholders and suppliers, delivering to the whole of the UK. West Yorkshire Steel are suppliers of Duplex stainless steel in round bar, sheet and plate. Stocks are held in grade [UNS S31803](#) 1.4462 F51.

Duplex stainless steel offers improved resistance to stress corrosion cracking, pitting and crevice corrosion. With a similar ductility to an austenitic stainless though duplex stainless steel has a higher tensile strength and twice the yield strength. A duplex stainless steel has a ductile/brittle transition at approximately -50°C. Duplex stainless steel has a mixed microstructure of austenite and ferrite and therefore combines the best properties of austenitic and ferritic steel. It is characterised by high chromium (19–28%), molybdenum (up to 5%) and lower nickel contents than austenitic stainless steels. Duplex stainless alloys have high corrosion resistance properties similar to austenitic type grades with good resistance to chloride stress corrosion cracking. Duplex stainless is more impact resistant than ferritic stainless types, embrittlement can occur with prolonged use at temperatures above 300°C. It has a thermal expansion nearer that of a carbon steel than is the case with austenitic stainless steel grades.

We welcome export enquiries for stainless steel. Contact our sales office and consult our [shipping policy](#) for further details.

Form of Supply

West Yorkshire Steel are stockholders and suppliers of duplex stainless steel grades and specifications in round bar, sheet and plate.

- Sheet
 - Plate
 - Diameter
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Specifications

Below we list our popular duplex stainless steel grades. If you are unable to find the specification you require please contact our experienced sales team who may be able to assist you.

| UNS | ASTM | Werkstoff |
|------------------------|------|-----------|
| S31083 | A182 | EN10083 |
| | F51 | 1.4462 |

Welding

We recommend you contact your welding consumables supplier who should provide you full assistance and information on welding duplex stainless steel grades.

Certification

Duplex stainless steel grades are available with BS EN 10204 3.1 mill certificate, please request when placing any orders.

Quality Assured Supply

All our duplex stainless steel specifications are supplied in accordance with our ISO 9001:2015 registration.