

ASTM A790 Duplex Stainless Steel Pipe - Data Sheet

Mejor Steel, export sourcing for steel pipe and OCTG | <https://mejorsteel.com/get-a-quote/>

Supply range

Outside diameter Commonly 1/2 in to 24 in (21.3 to 610 mm), to the size fixed on the order

Wall thickness SCH 10S to SCH 80S, or by wall thickness

Length SRL 5.8 m, DRL 11.8 m, or fixed length

Ends Plain end, beveled end

Surface treatment Pickled and passivated, or as specified

Manufacturing process Seamless or straight-seam welded

Heat treatment Solution annealed and quenched

Delivery standard ASTM A790 / A790M, dimensions to ASME B36.19M for the S schedules

Inspection and documentation

Inspection Inspected by the producing mill's own inspection department, which is independent of production, against the delivery standard above. Third-party inspection - SGS, BV or TUV, or an inspector you send yourself - can be arranged at the mill or before shipment; give us the dates and the scope at the order stage.

Certificate A mill test certificate to EN 10204 3.1 showing the heat number, the chemical composition and the mechanical results is standard on every order. EN 10204 3.2, countersigned by the inspector you nominate, is available on request.

Documents with the goods The mill test certificate and the packing list travel with the shipment, and the heat number is traceable from cast through to the finished product.

Packing Sea-worthy export packing: bundled by size with end protection, corrosion protection on request, stencilled with the size, grade and heat number.

MOQ One bundle or one truckload; mixed sizes within a bundle accepted.

Lead time Counted from order confirmation, not from the enquiry. Stock sizes 7-15 days; mill run or non-stock 4-6 weeks. The delivery window is fixed on the quotation.

How we supply Sourced through partner mills; the producing mill is named on the quotation.

Chemical composition

Element	S31803 (2205)	S32205 (2205)	S32750 (2507)
Carbon, C	0.030 max	0.030 max	0.030 max
Chromium, Cr	21.0 - 23.0	22.0 - 23.0	24.0 - 26.0
Nickel, Ni	4.5 - 6.5	4.5 - 6.5	6.0 - 8.0
Molybdenum, Mo	2.5 - 3.5	3.0 - 3.5	3.0 - 5.0
Nitrogen, N	0.08 - 0.20	0.14 - 0.20	0.24 - 0.32

Mechanical properties

Grade	Tensile strength	Yield strength	Elongation
S31803 (2205)	620 MPa min (90,000 psi)	450 MPa min (65,000 psi)	25% min
S32205 (2205)	655 MPa min (95,000 psi)	450 MPa min (65,000 psi)	25% min
S32750 (2507)	795 MPa min (116,000 psi)	550 MPa min (80,000 psi)	15% min

Source

Source: chemical composition requirements of ASTM A790 / A790M. The standard is the governing document.

Source: tensile requirements of ASTM A790 / A790M. The standard is the governing document.

Schematic: minimum tensile strength rises from 620 MPa for S31803 to 655 MPa for S32205 and 795 MPa for S32750, following the chromium, molybdenum and nitrogen content. Relative ranking, not to scale. Source: this page's mechanical properties table.

Page: <https://mejorsteel.com/standards/astm-a790-duplex-pipe/> | The standard is the governing document. MOQ, lead time and price are confirmed on request.