

# ASTM A210 Grade A1 Boiler Tube - Data Sheet

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

## Supply range

Outside diameter 1/2 inch - 5 inch (12.7 - 127 mm), or by outside diameter

Wall thickness 0.9 - 12.7 mm (0.035 - 0.500 inch); ordered as minimum wall or average wall

Length SRL 5.8 m, DRL 11.8 m, or fixed length; U-bent on request

Ends Plain end, beveled end

Surface treatment Pickled, black, oiled, or as specified

Delivery condition Hot finished, or cold drawn and heat treated

Manufacturing process Seamless, hot finished or cold drawn

Heat treatment Cold drawn tube is heat treated after the final drawing pass

Delivery standard ASTM A210 / ASME SA210, general requirements to A1016 / SA1016

## 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       | Requirement   | Element        | Requirement   |
|---------------|---------------|----------------|---------------|
| Carbon, C     | 0.27 max      | Silicon, Si    | 0.10 min      |
| Manganese, Mn | 0.93 max      | Phosphorus, P  | 0.035 max     |
| Sulphur, S    | 0.035 max     | Chromium, Cr   | not specified |
| Nickel, Ni    | not specified | Molybdenum, Mo | not specified |

## Mechanical properties

| Grade                        | Tensile strength         | Yield strength           | Elongation | Hardness   |
|------------------------------|--------------------------|--------------------------|------------|------------|
| A210 Grade A-1               | 415 MPa min (60,000 psi) | 255 MPa min (37,000 psi) | 30% min    | 79 HRB max |
| A210 Grade C (for reference) | 485 MPa min (70,000 psi) | 275 MPa min (40,000 psi) | 30% min    | 89 HRB max |

## Source

Source: chemical composition requirements of ASTM A210 / ASME SA210. The standard is the governing document.

Source: tensile requirements of ASTM A210 / ASME SA210. The standard is the governing document.

A210 Grade A-1 carries a 415 MPa minimum tensile strength, a 255 MPa minimum yield and a 79 HRB hardness ceiling, against 325 MPa and 180 MPa for A192 and 485 MPa and 275 MPa for A210 Grade C. Source: this page's A210 Grade A-1 and Grade C table, with the A192 reference row from the same page.

Page: <https://mejorsteel.com/standards/astm-a210-grade-a1-pipe/> | The standard is the governing document. MOQ, lead time and price are confirmed on request.