

API 5L Grade B Pipe - Data Sheet

Line pipe for oil, gas, water and slurry transmission | API 5L / ISO 3183, PSL1 or PSL2 | Mejor Steel, export sourcing for steel pipe and OCTG

1. What to state on an enquiry

State the grade (API 5L Grade B), product specification level (PSL1 or PSL2), outside diameter, wall thickness or schedule, length, end finish and coating. Saying only Grade B is not enough, because PSL1 and PSL2 are not interchangeable.

2. Supply range

Outside diameter	1/2 in - 48 in (12.7 - 1219 mm); seamless normally up to 24 in, LSAW up to 48 in and above
Wall thickness	3.2 - 40 mm (SCH 10 - SCH 160, or by wall thickness)
Length	SRL 5.8 m, DRL 11.8 m, 20 FT, 40 FT, or random 6 - 18 m
Ends	Plain end, beveled end, threaded with coupling
Surface treatment	Black varnish, 3PE / 3LPE, FBE, 3PP, bare
Delivery condition	As-rolled (R), normalized (N), quenched and tempered (Q), thermomechanical (M)
Manufacturing process	Hot rolled seamless, ERW, LSAW, SSAW

3. Chemical composition, wall thickness up to 25.0 mm (maximum, %)

Grade	C	Si	Mn	P	S	CE(IIW)
PSL1 Grade B	0.28	not specified	1.20	0.030	0.030	not required
PSL2 Grade B, R and N condition	0.24	0.40	1.20	0.025	0.015	0.43

PSL1 sets minimum chemistry only. PSL2 tightens carbon, phosphorus and sulphur and adds a carbon equivalent limit. Quenched and tempered Grade B (BQ) is a separate PSL2 row at carbon 0.18% max and manganese 1.40% max. Unless otherwise agreed, Nb + V + Ti is limited to 0.15%.

4. Mechanical properties

Grade	ISO 3183 designation	Yield strength	Tensile strength	Yield/tensile max	Elongation
Grade B PSL1	L245	245 MPa min (35,500 psi)	415 MPa min (60,200 psi)	not specified	per formula
Grade B PSL2	L245	245 - 450 MPa (35,500 - 65,300 psi)	415 - 760 MPa (60,200 - 110,200 psi)	0.93	per formula

PSL1 specifies minimum values only. PSL2 adds maximum values and a 0.93 yield/tensile ratio cap, and requires Charpy V-notch impact testing. Elongation is calculated from the API 5L formula; the standard is the governing document.

5. Inspection and documentation

Mill test certificate to EN 10204 3.1 is standard on every order, showing heat number, chemical composition and mechanical results. EN 10204 3.2, countersigned by the inspector you nominate, is available on request. Third-party inspection can be arranged at the mill or before shipment. Heat number traceability runs from cast to finished product.

Source: chemical composition requirements of API 5L / ISO 3183, Table 4 (PSL 1) and Table 5 (PSL 2); tensile requirements of API 5L / ISO 3183, Table 7. The standard is the governing document. MOQ, lead time and price are confirmed on request against the exact specification and destination.

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