

**ASTM A519 American Standard (Seamless Carbon and Alloy Steel Mechanical Tube)**

**Standard:** ASTM A519

**Application:**

For mechanical engineering

For mechanical and pressure use, and also for transporting steam, water, gas, etc.

**Grade and Chemical Composition (%)**

Steel Grade	C	Mn	P≤	S≤	Si	Cr	Mo
1008	≤0.10	0.30-0.50	0.040	0.050	-	-	-
1010	0.08-0.13	0.30-0.60	0.040	0.050	-	-	-
1018	0.15-0.20	0.60-0.90	0.040	0.050	-	-	-
1020	0.18-0.23	0.30-0.60	0.040	0.050	-	-	-
1025	0.22-0.28	0.30-0.60	0.040	0.050	-	-	-
1026	0.22-0.28	0.60-0.90	0.040	0.050	-	-	-
4130	0.28-0.33	0.40-0.60	0.040	0.040	0.15-0.35	0.80-1.1	0.15-0.25
4140	0.38-0.43	0.75-1.00	0.040	0.040	0.15-0.35	0.80-1.1	0.15-0.35

**Mechanical Properties**

Steel Grade	Condition	Tensile Point (MPa)	Yield Point (MPa)	Elongation %
1020	CW	≥414	≥483	≥5%
	SR	≥345	≥448	≥10%
	A	≥193	≥331	≥30%
	N	≥234	≥379	≥22%
1025	CW	≥448	≥517	≥5%
	SR	≥379	≥483	≥8%
	A	≥207	≥365	≥25%
	N	≥248	≥379	≥22%
4130	SR	≥586	≥724	≥10%
	A	≥379	≥517	≥30%
	N	≥414	≥621	≥20%
4140	SR	≥689	≥855	≥10%
	A	≥414	≥552	≥25%
	N	≥621	≥855	≥20%

### Remarks

HR: hot rolled	CW: cold worked	SR: stress relieved
A: annealed	N: normalized	HF