

## ASTM A519-03, SAE American Standard (Mechanical Structure Tube)

### Standard:

ASTM A519-03 - Standard of American Testing & Materials Association

SAE - Standard of American Automotive Engineers Association

### Application:

Seamless steel tube for machinery, automobile and other parts

### Chemical Composition

Steel Grade	Chemical Composition Limits, %						
	C	Mn	P max	S max	Si	Cr	Mo
MT 1010	0.05-0.15	0.30-0.60	0.040	0.050	/	/	/
MT 1015	0.10-0.20	0.30-0.60	0.040	0.050	/	/	/
MT X 1015	0.10-0.20	0.60-0.90	0.040	0.050	/	/	/
MT 1020	0.15-0.25	0.30-0.60	0.040	0.050	/	/	/
MT X 1020	0.15-0.25	0.70-1.00	0.040	0.050	/	/	/
1008	0.10	0.30-0.50	0.040	0.050	/	/	/
1010	0.08-0.13	0.30-0.60	0.040	0.050	/	/	/
1012	0.10-0.15	0.30-0.60	0.040	0.050	/	/	/
1015	0.13-0.18	0.30-0.60	0.040	0.050	/	/	/
1016	0.13-0.18	0.60-0.90	0.040	0.050	/	/	/
1017	0.15-0.20	0.30-0.60	0.040	0.050	/	/	/
1018	0.15-0.20	0.60-0.90	0.040	0.050	/	/	/
1019	0.15-0.20	0.70-1.00	0.040	0.050	/	/	/
1020	0.18-0.23	0.30-0.60	0.040	0.050	/	/	/
1021	0.18-0.23	0.60-0.90	0.040	0.050	/	/	/
1022	0.18-0.23	0.70-1.00	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	/	/	/
1030	0.28-0.34	0.60-0.90	0.040	0.050	/	/	/
1035	0.32-0.38	0.60-0.90	0.040	0.050	/	/	/
1040	0.37-0.44	0.60-0.90	0.040	0.050	/	/	/
1045	0.43-0.50	0.60-0.90	0.040	0.050	/	/	/
1050	0.48-0.55	0.60-0.90	0.040	0.050	/	/	/

1518	0.15-0.21	1.10-1.40	0.040	0.050	/	/	/
1524	0.19-0.25	1.35-1.65	0.040	0.050	/	/	/
1541	0.36-0.44	1.35-1.65	0.040	0.050	/	/	/
4118	0.18-0.23	0.70-0.90	0.040	0.040	0.15-0.35	0.40-0.60	0.08-0.15
4130	0.28-0.33	0.40-0.60	0.040	0.040	0.15-0.35	0.80-1.10	0.15-0.25
4135	0.33-0.38	0.70-0.90	0.040	0.040	0.15-0.35	0.80-1.10	0.15-0.25
4137	0.35-0.40	0.70-0.90	0.040	0.040	0.15-0.35	0.80-1.10	0.15-0.25

**Remarks**

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