



**TABLE 1 Chemical Composition**

NOTE 1—Analysis is regularly made for the elements for which specific limits are listed. If however, the presence of “other” elements is suspected or indicated in the course of routine analysis, further analysis shall be made to determine that the total of these “other” elements and the listed impurities is not in excess of the total impurities limit.

NOTE 2—Refer to 5.2.

Element	Weight, %
Silver	74.0–76.0
Copper	(23.5 min) report by difference
Nickel	0.35–0.65
Impurities	
Zinc	0.06 max
Iron	0.05 max
Cadmium	0.01 max
Lead	0.03 max
Total of all impurities	0.15 max

**TABLE 2 Mechanical Properties of Wire and Rod**

Area Reduction, %	Temper Designation	B and S No.	Tensile Strength		% Elongation in 2 in. (51 mm), min
			ksi	MPa	
0	annealed	0	40–55	280–380	10
11	1/8 hard		50–62	350–430	5
21	1/4 hard	1	58–68	400–470	4
37	1/2 hard	2	64–74	440–510	4
60	hard	4	70–80	480–550	2
84	spring	8	80–92	550–630	1

**TABLE 3 Mechanical Properties of Sheet and Strip**

Thickness Reduction, %	Temper Designation	B and S No.	Tensile Strength		Elongation% in 2 in. (51 mm), min	Hardness Rockwell 30T
			ksi	MPa		
annealed	annealed	0	45–57	310–390	8	46–58
11	1/4 hard	1	50–62	340–430	4	56–62
21	1/2 hard	2	55–67	370–450	3	60–66
37	hard	4	63–75	430–520	2	64–70

## APPENDIX

### (Nonmandatory Information)

#### X1. Typical Property Values

##### X1.1 Electrical Conductivity:

Temper	Annealed	1/4 Hard	1/2 Hard	Hard	Extra Hard	Spring	Extra Spring
B and S No.	0	1	2	4	6	8	10
Electrical Conductivity IACS, percent	76	74	74	73	72	70	70
MS/m	44.1	42.9	42.9	42.3	41.8	40.6	40.6

**X1.2 Density:**

Nominal 10.04 Mg/m<sup>3</sup>(5.29 troy oz/in.<sup>3</sup>)

**X1.3 Linear Coefficient of Expansion:**

9.90 × 10<sup>-6</sup> in./in.-°F

17.82 × 10<sup>-6</sup> m/m°C

**X1.4 Modulus of Elasticity:**

12.3 × 10<sup>6</sup> psi (84.8 GPa)

**X1.5 Typical Mechanical Properties (Spring Temper—0.10 inch diameter wire):**

(a) Fatigue strength (Rotating Bending)

at 10<sup>8</sup> cycles      40 000 psi (280 MPa)

(b) Proportional limit      65 000 psi (455 MPa)

(c) Microhardness      160 HK 100g

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