Typical Running Tensions of Common Web Materials

Material	English		Metric	
Paperboard	**Weight** (points)	**Tension** (lbs/lin. inch)	**Weight** (g/m^2)	**Tension** (kg/cm)
	8	3.0	105	0.54
	12	4.0	157	0.72
	15	4.5	196	0.90
	20	5.5	260	1.26
	25	6.5	326	1.62
	30	8.0	391	1.98
Paper (based on 3,000 sq. foot ream)	15	0.40	25	0.135
	20	0.50	30	0.180
	30	0.75	50	0.270
	40	1.25	65	0.360
	60	2.00	100	0.540
	80	3.00	130	0.720

Material	English	Metric
	Tension (lbs/in/mil)	**Tension** (kg/cm/micron)
Aluminum Foils	1.0	0.0070
Cellophanes	0.5	0.0053
Acetate	0.5	0.0035
Mylar (Polyester)	0.75	0.0052
Polyethylene	0.25	0.0018
Polypropylene	0.25	0.0018
Polystyrene	1.0	0.0070
Saran	0.15	0.0007
Vinyl	0.25	0.0007
Nylon	0.25	0.0018
Wax Paper	1.0	0.0070

For laminated webs sum the tensions for the individual webs and add 0.1 lb/in. (0.018 kg/cm) of width.

Material	English	Metric
Copper Wire (15,000 psi)	**Tension** (lbs)	**Tension** (kg)
#16 (.051 inches)	30.00	13.6
#20 (.032 inches)	12.00	5.5
#24 (.020 inches)	4.50	2.0
#28 (.013 inches)	1.75	0.79
#30 (.010 inches)	1.25	0.57
#34 (.006 inches)	0.50	0.23
#36 (.005 inches)	0.25	0.11
#40 (.003 inches)	0.10	0.045

Run aluminum wire at ½ to ⅔ these values.

15,000 psi = 103.42 MPa

1 mil = 25.4 microns