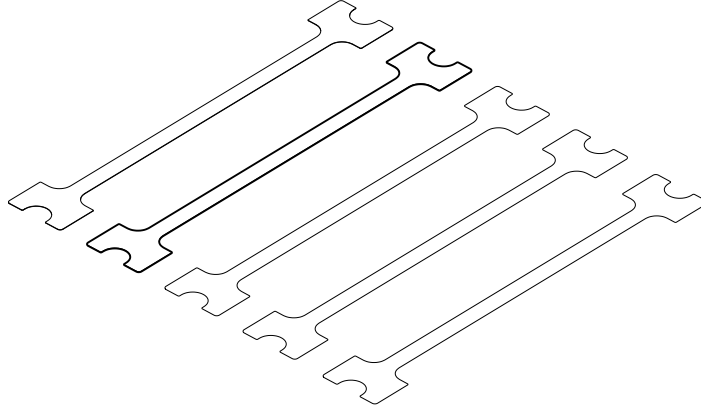


Metal Test Coupons

AP-8223


Introduction

The Metal Test Coupons are designed to be used with the Stress-Strain Apparatus (AP-8221A) to study the behavior of the samples under tensile stress. The coupons can also be used with the Materials Testing Machine (ME-8236) with the aid of the Materials Coupon Adapter (ME-8238). For information on using the test coupons with these devices, see the manual for the relevant apparatus.




Included components

- 10× thin brass coupons (0.003")
- 10× thick brass coupons (0.005")
- 10× cold-rolled steel coupons (0.003")
- 10× aluminum foil coupons (0.003")
- 10× annealed steel coupons (0.003")

 **NOTE:** The metal coupons are packaged in plastic containers prevent bending or creasing.

Coupon specifications

The table below records the cross-sectional area, tensile strength, tensile elongation, and modulus of elasticity of each coupon type. **Tensile strength** is the force per unit area required to break a material under tensile stress. **Tensile elongation** is the percent difference in length of the sample that occurs before the sample breaks. **Modulus of elasticity**, also known as tensile elasticity or Young's modulus, is equal to the slope of the stress-strain curve in the elastic deformation region. Tensile strength and modulus of elasticity are measured below with units of both megapascals (MPa, or 10^6 N/m²) and pounds per square inch (psi).

 **NOTE:** The table below is intended as a general guide only and will not necessarily correspond exactly to the results obtained. The nominal length of the narrow section of the coupon is 80 mm.

	Cold-rolled steel	Annealed steel	Aluminum	Brass (thin)	Brass (thick)
Cross-sectional area	0.303 mm ²	0.303 mm ²	0.303 mm ²	0.303 mm ²	0.506 mm ²
Tensile strength	300-360 MPa; 44,000-52,000 psi	300 MPa; 44,000 psi	90 MPa; 13,000 psi	430 MPa; 62,000 psi	430 MPa; 62,000 psi
Tensile elongation	20%	42-45%	15-28%	25%	25%
Modulus of elasticity	200,000 MPa; 29,000,000 psi	200,000 MPa; 29,000,000 psi	69,000 MPa; 10,000,000 psi	110,000 MPa; 16,000,000 psi	110,000 MPa; 16,000,000 psi

Technical support

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Limited warranty

For a description of the product warranty, see the Warranty and Returns page at www.pasco.com/legal.

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