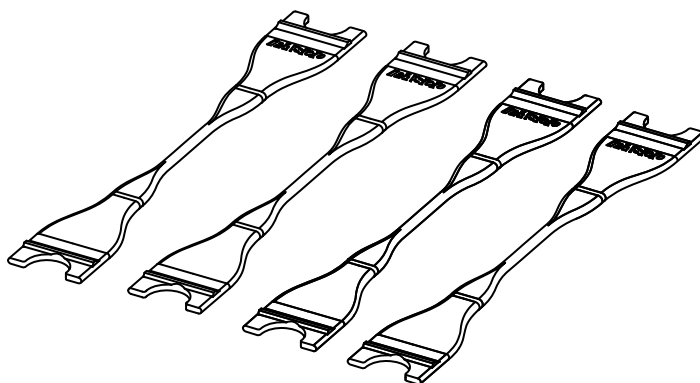


Plastic Test Coupons

AP-8222


Introduction

The Plastic Test Coupons are designed to be used with the Stress-Strain Apparatus (AP-8221A), allowing you to study the behavior of the coupons under tensile stress. You can also use the coupons with the Materials Testing Machine (ME-8236) with the aid of the Flat Coupon Fixture (ME-8238). For instructions on using the Plastic Test Coupons with these products, see the manual for the relevant apparatus.




Included components

- 10× high impact polystyrene (HIPS) coupons
- 10× nylon 6 coupons (15% glass fiber reinforced)
- 10× acrylonitrile butadiene styrene (ABS) coupons
- 10× polypropylene (PP) coupons

 **NOTE:** The plastic coupons are attached to a rectangular plastic rail called a "sprue". Use scissors or a knife to cut coupons from the sprue.

Coupon specifications

The following table lists the color, tensile strength, modulus of elasticity, and tensile elongation for each of the four coupon types. **Tensile strength** is the force per unit area required to break a material under tensile strength. **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 elongation** is the percent difference in length of the sample that occurs before the sample breaks. Tensile strength and modulus of elasticity are measured below with units of both megapascals (MPa, or 10^6 N/m^2) 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. Texturing differences during casting can lead to differences in strength and ductility, and the samples may become more brittle as the polymers age. The cross-sectional area of the narrow region of the coupon is 2.482 mm^2 , and the nominal length of the narrow section is 18 mm.

	HIPS	Nylon 6	ABS	Polypropylene
Coupon color	Orange	Black	Blue	White (clear)
Tensile strength	24 MPa; 3,480 psi	98 MPa; 14,000 psi	47 MPa; 6,800 psi	35 MPa; 5,080 psi
Modulus of elasticity	2,100 MPa; 305,000 psi	2,900 MPa; 420,000 psi	2,650 MPa; 384,000 psi	1,600 MPa; 232,000 psi
Tensile elongation	40%	4%	20%	22-90%

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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