

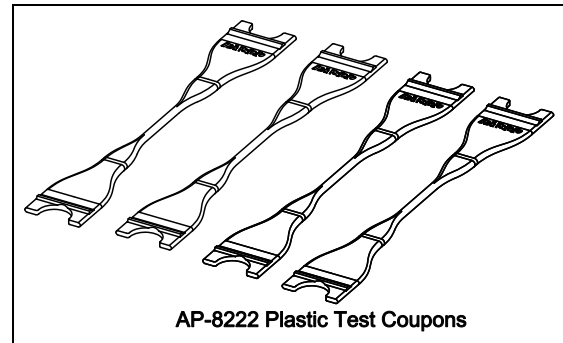
Plastic Test Coupons

AP-8222

AP-8222 Plastic Test Coupons

Four color-coded samples, 10 pieces per sample

- High impact polystyrene (HIPS)
- Nylon 6 (15% glass fiber reinforced)
- Acrylonitrile butadiene styrene (ABS)
- Polypropylene (PP)



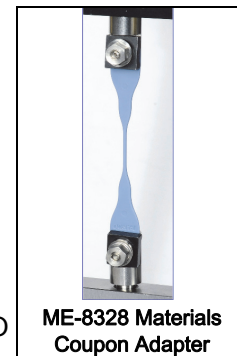
- NOTE: The plastic coupons are attached to a rectangular plastic rail called a 'sprue'. Use scissors or a knife to cut the coupon from the sprue.

The AP-8217A Replacement Test Coupons include all of the AP-8222 plastic and AP-8223 metal test coupons.

Introduction

The PASCO AP-8222 Plastic Test Coupons are designed to be used with the PASCO ME-8236 Materials Testing Machine, the AP-8221 Stress-Strain Apparatus (without Coupons), and the AP-8214A Stress-Strain Apparatus. The ME-8238 Materials Coupon Adapter is necessary for use with the ME-8236 Materials Testing Machine.

See the manual included with the Materials Testing Machine or the Stress/Strain Apparatus for information about using the plastic test coupons. See also the PASCO Web site for sample data and other information:



http://www.pasco.com/file_downloads/experiments/sample_labs/MTS_08-Tensile-Testing-Plastic-Coupons.zip

Test Coupon Specifications

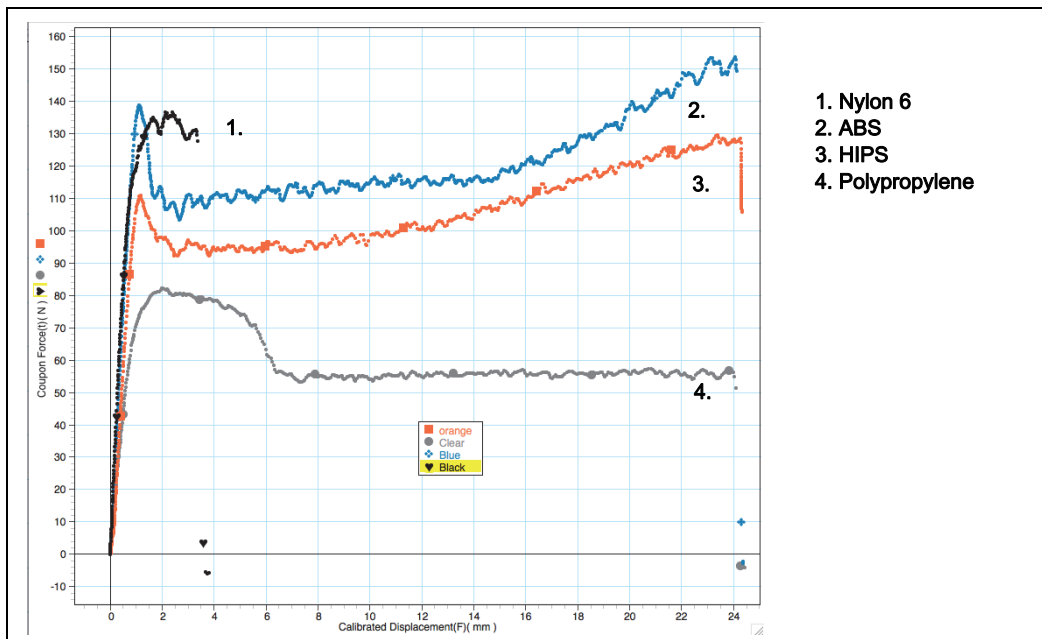
NOTE: The data are intended as a general guide only and do not necessarily represent results that may be obtained. Values are strain rate dependent and may be temperature dependent. The values may change as the polymers age. The cross-sectional area in the narrow region of the coupon is 2.482 mm² and the nominal length of the narrow section is 18 mm. The units for tensile strength and tensile elasticity are megapascals (MPa or 10⁶ N/m²) and pounds per square inch (psi).

Tensile Strength is the force per unit area required to break a material under tensile stress. Tensile Elasticity (also known as modulus of elasticity or Young's modulus) is the slope of the stress-strain curve in the elastic deformation region. Tensile Elongation at Yield (also known as the elastic limit) is the percent difference in length of the sample that occurs before it begins to deform. In other words, how far can the sample be stretched and still return to original length when the stress is removed. Tensile Elongation at Break is the percent difference in length of the sample that occurs before it breaks.

AP-8222 Plastic Test Coupons

Item	HIPS	nylon 6 (fiber)	ABS	polypropylene
Color code	orange	black	blue	white (clear)
Tensile strength	23 MPa/ 3410 psi	98 MPa/ 14000 psi	47 MPa/ 6800 psi	34 MPa/ 4900 psi
Tensile elasticity	2000 MPa/ 280000 psi	2900 MPa/ 420000 psi	2300 MPa/ 380000 psi	1900 MPa/ 239000 psi
Tensile elongation at yield	1.4%	2.5%	3.0%	6 - 12%
Tensile elongation at break	40 - 52%	10%	23 - 25%	100 - 650%

Sample Data (from ME-8236 Materials Testing Machine)



Technical Support

For assistance with any PASCO product, contact PASCO at

Address: PASCO scientific
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Roseville, CA 95747-7100

Phone: +1 916 462 8384 (worldwide)
800-772-8700 ext 1004 (U.S)

Web: www.pasco.com

Email: techsupp@pasco.com

For more information about the Plastic Test Coupons and the latest version of this instruction sheet, visit the PASCO web site at www.pasco.com and enter AP-8222 in the Search window.

Limited Warranty, Copyright, and Trademarks

For a description of the product warranty, copyright, and trademarks information, see the PASCO catalog or PASCO web site.