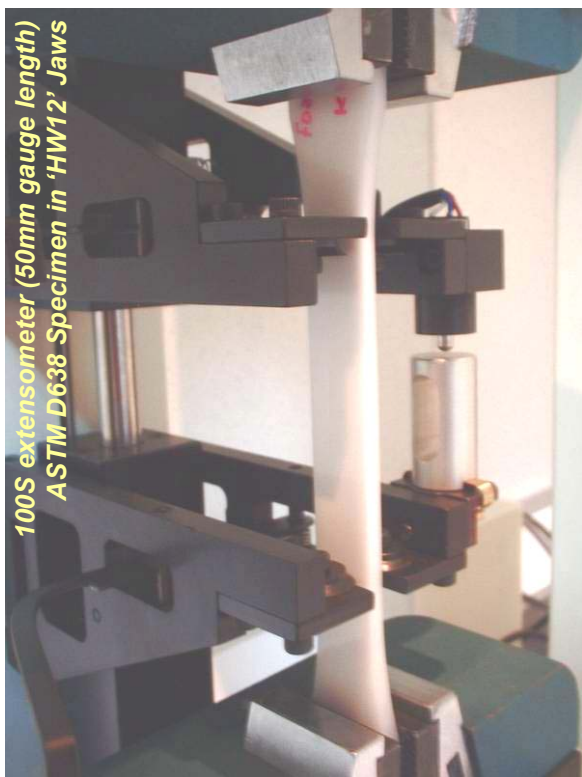


Application Note

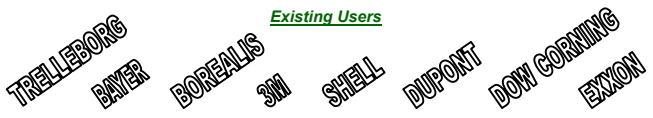
TENSILE, COMPRESSION, IMPACT, MELT FLOW, BRINELL, SHEAR, STRETCH RECOVERY, PUNCTURE, HEAT DISTORTION (VICAT), BEND/FLEXURE, SEAM STRENGTH, TORSION

Formulated Polymers – ASTM D638 Plastic Dumbbell Testing



Tinius Olsen has the widest experience of testing plastic specimens, having machines at most of the worlds largest plastic suppliers and manufacturers.

Existing customers include;



The Tinius Olsen software 'QMAT Professional' has the available test routines for most internationally recognised test standards, such as ASTM, ISO, BSI, DIN etc. Other test routines can be supplied for easy testing or the user can self write routines using the QMAT 'wizard' functionality.

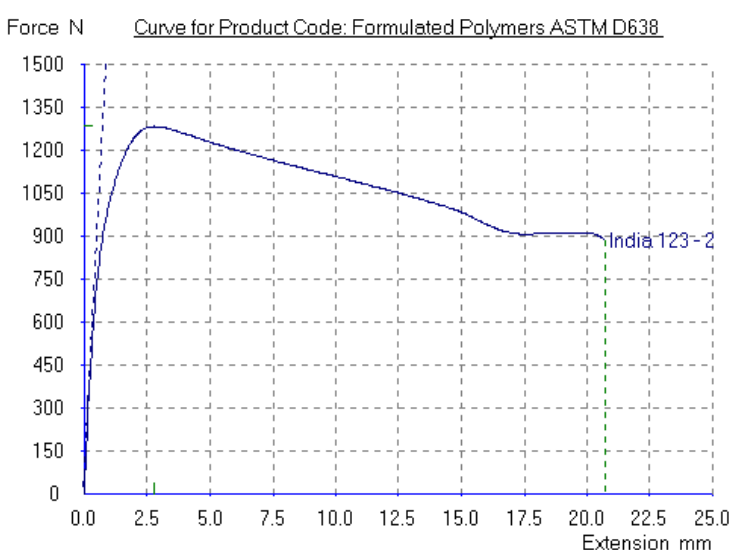


The Formulated Polymer specimen was tested using a model H10KS with 100S extensometer, and HW20 grips. (note it is recommended to have more than one specimen for testing)

Recommendation for testing products of this nature;

- H10KS
- 5KN loadcell
- Extensometer 100S
- HW20 grips
- QMAT Pro software

During the test the product 'necked' at the extensometer 'jaws', therefore ext @ break should not be considered as extension occurred outside the gauge markers. Only one specimen was supplied therefore a retest could not be performed



Results from Formulated Polymer specimen – using QMAT Professional

	E Modulus	Max Stress	Ext.@ Max	Brk Stress	Ext.@ Brk	Thickness	Width
Batch Reference	MPa	MPa	%	MPa	%	mm	mm
India 123 - 2	2174	32.45	5.55	22.33	41.4	3.13	12.64
n	1	1	1	1	1	1	1
Mean	2174	32.45	5.55	22.33	41.4	3.13	12.64
Std. Dev.	n/a	n/a	n/a	n/a	n/a	n/a	n/a