

ISO 527-1:2012-02 (E)

Plastics - Determination of tensile properties - Part 1: General principles

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Principle and methods	5
4.1	Principle	5
4.2	Method	6
5	Apparatus	6
5.1	Testing machine	6
5.2	Devices for measuring width and thickness of the test specimens	9
6	Test specimens	9
6.1	Shape and dimensions	9
6.2	Preparation of specimens	9
6.3	Gauge marks	10
6.4	Checking the test specimens	10
6.5	Anisotropy	10
7	Number of test specimens	10
8	Conditioning	11
9	Procedure	11
9.1	Test atmosphere	11
9.2	Dimensions of test specimen	11
9.3	Gripping	11
9.4	Prestresses	12
9.5	Setting of extensometers	12
9.6	Test speed	12
9.7	Recording of data	13
10	Calculation and expression of results	13
10.1	Stress	13
10.2	Strain	13
10.3	Tensile modulus	14
10.4	Poisson's ratio	15
10.5	Statistical parameters	16
10.6	Significant figures	16
11	Precision	16
12	Test report	16
Annex A (informative) Determination of strain at yield		18
Annex B (informative) Extensometer accuracy for the determination of Poisson's ratio		20

Annex C (normative) Calibration requirements for the determination of the tensile modulus	21
Bibliography	23