

# ISO 527-4:2023-03 (E)

## Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Principle .....	5
5	Apparatus .....	5
6	Test specimens .....	5
6.1	Shape and dimensions .....	5
6.2	Preparation of specimens .....	10
6.2.1	General .....	10
6.2.2	End tabs for type 3 specimens .....	10
6.2.3	Applications of end tabs for type 3 specimens .....	10
6.3	Gauge marks .....	10
6.4	Checking the specimens .....	10
6.5	Anisotropy .....	11
7	Number of specimens .....	11
8	Conditioning .....	11
9	Procedure .....	11
9.1	Test atmosphere .....	11
9.2	Measurement of specimen dimensions .....	11
9.3	Clamping .....	11
9.4	Prestresses .....	11
9.5	Setting of extensometers and strain gauges and placing of gauge marks .....	11
9.6	Speed of testing .....	12
9.6.1	For type 1B test specimens .....	12
9.6.2	For type 2, type 3 and type 4 test specimens .....	12
9.7	Recording of data .....	12
10	Calculation and expression of results .....	12
10.1	Calculation of all properties for parallel sided specimens .....	12
10.2	Failure location related calculation of tensile strength for type 4 specimens .....	12
11	Precision .....	12
12	Test report .....	13
Annex A (informative)	Alignment of specimens .....	14
Annex B (informative)	Testing with tapered tensile specimen geometry without tabs (type 4) .....	16
Annex C (informative)	Unbonded tabs or gripping condition without tabs using fine grip face .....	19
Annex D (normative)	Specimen preparation for type 2 and type 3 .....	22
Annex E (normative)	Failure location related calculation of tensile strength for type 4 specimens ...	24
Bibliography .....		28