

DIN 53504:2017-03 (E)

Testing of rubber - Determination of tensile strength at break, tensile stress at yield, elongation at break and stress values in a tensile test

Contents	Page
Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions.....	5
4 Designation	6
5 Apparatus	6
5.1 Instrument for measuring the thickness of test pieces.....	6
5.2 Instruments for determining the initial cross-sectional area of rings.....	6
5.3 Tensile testing machine	7
6 Calibration.....	8
7 Test pieces.....	8
7.1 Shape of test pieces.....	8
7.2 Preparation of test pieces.....	10
7.3 Number of test pieces.....	11
7.4 Reference marks.....	11
8 Procedure	11
8.1 General	11
8.2 Measurement of test pieces	11
8.3 Clamping the dumb-bell.....	12
8.4 Tensile test procedure.....	12
8.5 Determination of stress/strain values.....	13
9 Evaluation.....	14
9.1 Tensile strength at break.....	14
9.2 Tensile stress at yield	14
9.3 Elongation at break	15
9.4 Stress at a given strain.....	15
9.5 General	15
10 Test report.....	16
11 Precision of the method	16
11.1 General	16
11.2 Repeatability limit	17
11.3 Reproducibility limit.....	17
Annex A (normative) Calibration programme	18
Bibliography	20