ISO 18872:2007-02 (E)

Plastics - Determination of tensile properties at high strain rates

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Principle 1

4 Terms and definitions 1

5 Apparatus 2
5.1 Test assembly 2
5.2 Extensometers 2
5.3 Data-recording equipment 2

6 Test specimens 2
6.1 Low-strain measurements 2
6.2 High-strain measurements 2

7 Conditioning 3

8 Test procedure 3
8.1 General 3
8.2 Test speeds 3
8.3 Recording of data 3

9 Calculation and expression of results 3
9.1 Low-strain measurements 3
9.2 High-strain measurements 4

10 Modelling stress versus plastic strain curves 6
10.1 Low-strain measurements 6
10.2 High-strain measurements 6

11 Determination of properties over a wide range of strain rates 6
11.1 Tensile modulus 6
11.2 Stress/plastic strain curves 6

12 Precision 7

Annex A (informative) Modelling true stress against true plastic strain curves: Low-strain measurements 8

Annex B (informative) Modelling true stress against true plastic strain curves: High-strain measurements 11