ISO 6721-4:2019 (E)

Plastics — Determination of dynamic mechanical properties — Part 4: Tensile vibration — Non-resonance method

Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

4 Principle

5 Test device

5.1 Loading assembly
5.1.1 General
5.1.2 Clamps
5.1.3 Transducers
5.2 Electronic data-processing equipment
5.3 Temperature measurement and control
5.4 Devices for measuring test specimen dimensions

6 Test specimens

6.1 General
6.2 Shape and dimensions
6.3 Preparation

7 Number of specimens

8 Conditioning

9 Procedure

9.1 Test atmosphere
9.2 Measurement of specimen cross-section
9.3 Clamping the specimen
9.4 Varying the temperature
9.5 Performing the test

10 Expression of results

10.1 Symbols
10.2 Calculation of the tensile storage modulus E′
10.2.1 General
10.2.2 Avoidance of specimen resonance
10.2.3 Correction for transducer resonance
10.2.4 Correction for apparatus compliance
10.2.5 Application of a length correction
10.3 Calculation of the tensile loss factor tan δE
10.4 Calculation of the tensile loss modulus
10.5 Presentation of data as a function of temperature

11 Precision

12 Test report

Page count: 9