ISO 20965:2021 (E)

Plastics — Determination of the transient extensional viscosity of polymer melts

Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

4 General principles

5 Apparatus

- 5.1 General description
- 5.2 Silicon oil bath/temperature-controlled chamber
- 5.3 Temperature measurement and control
- 5.4 Strain and strain rate measurement
- 5.5 Force measurement
- 5.6 Calibration

6 Sampling and specimen preparation

- 6.1 Sampling
- 6.2 Specimen preparation
- 6.3 Specimen mounting

7 Procedure

- 7.1 Specimen loading
- 7.2 Pre-conditioning of the specimen
- 7.3 Testing

8 Analysis of extensional flow measurements

- 8.1 Symbols used
- 8.2 Analysis of extensional flow
- 8.2.1 General
- 8.2.2 Analysis for type A and B instruments (rotating clamps)
- 8.2.3 Analysis for type C and D instruments (translating clamps)

9 Precision

10 Test report

Annex A (informative) Checking for swelling of specimens due to immersion in silicone oilor other fluids

Annex B (informative) Uncertainties in transient extensional viscosity testing

- B.1 Overview
- B.2 Uncertainty analysis — General
- B.3 Analysis of the uncertainties in the measurement of transient extensional viscosity

Page count: 19