DIN EN ISO 22007-2:2022-09 (E)

Plastics - Determination of thermal conductivity and thermal diffusivity - Part 2: Transient plane heat source (hot disc) method (ISO 22007-2:2022)

Contents

Page

European foreword ... **3**

Foreword ... **4**

Introduction ... **5**

1 Scope ... **6**

2 Normative references ... **6**

3 Terms and definitions ... **6**

4 Principle ... **8**

5 Apparatus ... **8**

6 Test specimens ... **10**
6.1 Bulk specimens ... 10
6.2 Anisotropic bulk specimens ... 11
6.3 Slab specimens ... 11
6.4 Thin-film specimens ... 12

7 Procedure ... **12**

8 Calculation of thermal properties ... **14**
8.1 Bulk specimens ... 14
8.2 Anisotropic bulk specimens ... 17
8.3 Slab specimens ... 18
8.4 Thin-film specimens ... 19
8.5 Low thermally conducting specimens ... 20
8.5.1 Introductory remarks ... 20
8.5.2 Low thermally conducting bulk specimens ... 20
8.5.3 Low thermally conducting anisotropic bulk specimens ... 22
8.5.4 Low thermally conducting thin–film specimen ... 22

9 Calibration and verification ... **22**
9.1 Calibration of apparatus ... 22
9.2 Verification of apparatus ... 23

10 Precision and bias ... **23**

11 Test report ... **24**

Bibliography ... **25**