ISO 19613:2026-09 (E)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Measurement of viscosity of ceramic slurry by use of a rotational viscometer

Contents

Page

Foreword ..... **iv**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Principle **3**
4.1 Rotational viscometer with defined shear rate 3
4.2 Single cylinder viscometer 4

5 Apparatus **4**
5.1 General 4
5.2 Measuring system 4
5.2.1 General 4
5.2.2 Basic capacity of the instrument 4
5.2.3 Installation of rotational viscometer 4
5.3 Single cylinder viscometer. 5
5.3.1 Main body of single cylinder viscometer 5
5.3.2 Spindle 5
5.4 Temperature-control device. 5
5.4.1 Thermostat 5
5.4.2 Thermometer 5

6 Calibration of the rotational viscometer **5**

7 Measurement condition **6**
7.1 Temperature 6
7.2 Shear rate or angular velocity 6
7.3 Selection of geometry and/or spindle 6

8 Pretreatment of the sample **6**
8.1 Conditioning 6
8.2 Mixing 6
8.3 Degassing 7

9 Measurement procedures **7**
9.1 Sample loading 7
9.2 Container sealing 7
9.3 Determination of a flow or viscosity curve 7
9.3.1 General 7
9.3.2 Measurement with a shear rate or angular velocity sweep 7
9.3.3 Flow curve 8
9.3.4 Viscosity curve 8
9.4 Viscosity measurements 8
9.4.1 General 8
9.4.2 Measurement at fixed shear rate or angular velocity 8
9.4.3 Repeat and case of several measurements 9

10 Expression of the results **9**

11 Test report **9**

Annex A (informative) **Coaxial double cylinder system** **10**

Annex B (informative) **Cone and plate system** **13**
Annex C (informative) **Parallel plate system** **14**
Annex D (informative) **Single cylinder viscometer** **16**
Annex E (informative) **Typical ranges of shear rate values** **19**
Bibliography **20**