

ISO 20379:2018-02 (E)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Measurement of thixotropic behaviour 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 | 2 |
| 4.1 | Evaluation of thixotropic behaviour by hysteresis measurement of flow curve | 2 |
| 4.2 | Evaluation of thixotropic behaviour by time-dependence of shear stress at constant low shear rate | 2 |
| 5 | Apparatus | 2 |
| 5.1 | Measuring system | 2 |
| 5.2 | Basic capacity of the instrument | 2 |
| 5.3 | Calibration of rotational viscometer | 3 |
| 5.4 | Temperature control device | 3 |
| 6 | Pretreatment of the slurry samples | 3 |
| 6.1 | General | 3 |
| 6.2 | Degassing | 3 |
| 6.3 | Dispersion by stirring, mixing and ultrasonication | 3 |
| 7 | Measurement condition | 3 |
| 7.1 | Setting of ceramic slurry to rotational viscometer | 3 |
| 7.2 | Temperature | 3 |
| 8 | Measurement procedure | 4 |
| 8.1 | Measurement of thixotropic behaviour by hysteresis measurement of flow curve | 4 |
| 8.1.1 | Condition of shear rate and setting of measurement range | 4 |
| 8.1.2 | Measurement procedure | 4 |
| 8.1.3 | Analysis method of measurement results | 4 |
| 8.2 | Measurement of thixotropic behaviour by time-dependence of shear stress at constant low shear rate | 5 |
| 8.2.1 | Setting of measurement programme | 5 |
| 8.2.2 | Measurement procedure | 5 |
| 8.2.3 | Analysis method of measurement results | 5 |
| 9 | Test report | 6 |
| Bibliography | | 8 |