

ISO 20506:2005-10 (E)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Determination of the in-plane shear strength of continuous-fibre-reinforced composites at ambient temperature by the Iosipescu test

| Contents | | Page |
|-----------------|--|-------------|
| Foreword | | iv |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Symbols and designations | 2 |
| 5 | Principle | 3 |
| 6 | Interferences | 4 |
| 6.1 | Test environment | 4 |
| 6.2 | Preparation of test pieces | 4 |
| 6.3 | Failures outside gauge section | 4 |
| 6.4 | Clamping forces | 4 |
| 6.5 | Friction | 4 |
| 6.6 | Thin test pieces | 4 |
| 7 | Apparatus | 4 |
| 7.1 | Testing machines | 4 |
| 7.2 | Data acquisition | 5 |
| 7.3 | Dimension-measuring devices | 5 |
| 7.4 | Test fixture | 5 |
| 8 | Test piece | 6 |
| 8.1 | Test piece geometry | 6 |
| 8.2 | Test piece preparation | 6 |
| 8.2.1 | Customary practices | 6 |
| 8.2.2 | Standard procedures | 7 |
| 8.2.3 | Handling precautions | 7 |
| 8.3 | Number of test pieces | 7 |
| 9 | Precautionary statement | 7 |
| 10 | Test conditions | 7 |
| 10.1 | Test modes and rates | 7 |
| 10.1.1 | Displacement rate | 7 |
| 10.1.2 | Load rate | 8 |
| 11 | Procedure | 8 |
| 11.1 | Test piece dimensions | 8 |
| 11.2 | Preparations for testing | 8 |
| 11.3 | Conducting the test | 8 |
| 11.3.1 | Mount the test piece in the test fixture | 8 |
| 11.3.2 | Begin data acquisition | 9 |
| 11.3.3 | Initiate the action of the test machine | 9 |
| 11.4 | Completion of testing | 9 |

| | | |
|--|------------------------------|----|
| 11.5 | Post test | 11 |
| 12 | Calculation of results | 11 |
| 12.1 | Shear strength | 11 |
| 12.2 | Statistics | 11 |
| 13 | Test report | 12 |
| Annex A (informative) Results of round-robin tests | | 13 |
| Bibliography | | 15 |