

# DIN EN ISO 18754:2022-06 (E)

## Fine ceramics (advanced ceramics, advanced technical ceramics) - Determination of density and apparent porosity (ISO 18754:2020)

---

<b>Contents</b>		<b>Page</b>
<b>European foreword</b> .....		<b>3</b>
<b>Foreword</b> .....		<b>4</b>
<b>1 Scope</b> .....		<b>5</b>
<b>2 Normative references</b> .....		<b>5</b>
<b>3 Terms and definitions</b> .....		<b>5</b>
<b>4 Method by liquid displacement (Method A)</b> .....		<b>6</b>
4.1 Principle .....		6
4.2 Apparatus .....		6
4.3 Test pieces .....		7
4.3.1 General requirements .....		7
4.3.2 Specific requirements for ceramic matrix composites .....		7
4.4 Procedure .....		8
4.4.1 Determination of the mass of the dried test piece .....		8
4.4.2 Impregnation of the test piece with the immersion liquid .....		8
4.4.3 Determination of the apparent mass of the test piece .....		8
4.4.4 Determination of the mass of the soaked test piece .....		9
4.4.5 Determination of the density of the immersion liquid .....		9
4.5 Accuracy of mass measurement .....		9
4.6 Expression of results .....		9
4.6.1 Apparent solid density .....		9
4.6.2 Bulk density .....		10
4.6.3 Apparent porosity .....		10
<b>5 Method by measurement of dimensions and mass (Method B)</b> .....		<b>10</b>
5.1 Principle .....		10
5.2 Apparatus .....		11
5.3 Test pieces .....		11
5.3.1 General requirements .....		11
5.3.2 Specific requirements for ceramic matrix composites .....		12
5.4 Procedure .....		12
5.4.1 Determination of the mass of the dried test pieces .....		12
5.4.2 Determination of the dimensions of the dried test pieces .....		12
5.5 Expression of results .....		12
<b>6 Test report</b> .....		<b>13</b>
<b>Bibliography</b> .....		<b>14</b>