

DIN EN ISO 20504:2023-03 (E)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Mechanical properties of ceramic composites at room temperature - Determination of compressive properties (ISO 20504:2022)

Contents		Page
European foreword		3
Foreword		4
1 Scope		5
2 Normative references		5
3 Terms and definitions		5
4 Principle		7
5 Apparatus		7
5.1 Test machine		7
5.2 Load train		7
5.3 Strain measurement		8
5.3.1 General		8
5.3.2 Strain gauges		8
5.3.3 Extensometry		8
5.4 Data recording system		8
5.5 Dimension-measuring devices		8
6 Test specimens		9
6.1 General		9
6.2 Compression between platens		9
6.3 Test specimen used with grips		11
7 Test specimen preparation		14
7.1 Machining and preparation		14
7.2 Number of test specimens		14
8 Test procedure		14
8.1 Test mode and rate		14
8.2 Measurement of test specimen dimensions		14
8.3 Buckling		14
8.4 Testing technique		15
8.4.1 Test specimen mounting		15
8.4.2 Extensometers		15
8.4.3 Measurements		15
8.5 Test validity		15
9 Calculation of results		15
9.1 Test specimen origin		15
9.2 Compressive strength		16
9.3 Strain at maximum compressive force		16
9.4 Proportionality ratio or pseudo-elastic modulus, elastic modulus		16
10 Test report		17
Annex A (informative) Illustration of elastic modulus		19
Bibliography		21