

ISO 17565:2003-12 (E)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for flexural strength of monolithic ceramics at elevated temperature

Contents		Page
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Principle	3
5	Apparatus	3
5.1	Testing machine	3
5.2	Heating device	3
5.3	Temperature measuring and indicating instruments	4
5.4	Testing fixture	5
5.5	Micrometer	9
6	Test pieces	9
6.1	Test piece size	9
6.2	Test piece preparation	10
7	Procedure	10
8	Calculation	13
8.1	Standard formula for the flexural strength in four-point flexure	13
8.2	Standard formula for the flexural strength in three-point flexure	14
8.3	Corrections for chamfer size	14
8.4	Corrections for thermal expansion	14
8.5	Mean strength and standard deviation	15
9	Accuracy and precision	15
10	Test report	15
11	Strength scaling factors	16
Annex A (informative) General information		17
Annex B (normative) Chamfer correction factors		18
Annex C (normative) Corrections for thermal expansion		21
Annex D (informative) Weibull scaling factors		23
Annex E (informative) VAMAS round robin		25
Bibliography		26