

# ISO 17590:2025-07 (E)

## Fine ceramics (advanced ceramics, advanced technical ceramics) - Methods of tests for reinforcements - Determination of the tensile properties of ceramic filaments at elevated temperature in air using the hot grip technique

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Principle .....	2
5	Apparatus .....	3
5.1	Tensile testing machine .....	3
5.2	Grip system .....	3
5.3	Specimen holding device .....	3
5.4	Adhesive .....	4
5.5	Thermocouples .....	4
5.6	Heating device .....	4
6	Test specimen gauge length .....	5
7	Test specimen preparation .....	5
7.1	Size removal .....	5
7.2	Test specimen assembly .....	5
7.3	Filament selection .....	6
7.4	Filament gluing .....	7
7.5	Filament initial cross-section area determination .....	7
7.6	Number of test specimens .....	7
8	Test procedure .....	7
8.1	Load cell .....	7
8.2	Specimen mounting .....	7
8.3	Specimen adjusting .....	7
8.4	Furnace heating .....	7
8.5	Displacement rate setting .....	8
8.6	Measurement .....	8
8.7	Test validity .....	8
9	Calculation of results .....	8
9.1	Tensile strength .....	8
9.2	Total compliance .....	8
9.3	Load train compliance .....	9
9.4	Young's modulus .....	10
9.5	Fracture strain .....	10
10	Test report .....	11
Bibliography .....		12