

ISO 17554:2014-12 (E)

Reaction to fire tests - Mass loss measurement

Contents		Page
Foreword		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols	2
5	Principle	3
6	Apparatus	3
6.1	General	3
6.2	Cone-shaped radiant electrical heater	4
6.3	Radiation shield	5
6.4	Irradiance control	5
6.5	Weighing device	5
6.6	Specimen holder and retainer frame	5
6.7	Ignition circuit	7
6.8	Ignition timer	7
6.9	Heat flux meters	8
6.10	Data collection and analysis system	8
7	Suitability of a product for testing	8
7.1	Surface characteristics	8
7.2	Asymmetrical products	8
7.3	Materials of short burning time	8
7.4	Composite specimens	9
7.5	Dimensionally unstable materials	9
7.6	Materials that require testing under compression	10
8	Specimen construction and preparation	10
8.1	Specimens	10
8.2	Conditioning of specimens	11
8.3	Preparation	11
8.3.1	Specimen wrapping	11
8.3.2	Specimen preparation	11
8.3.3	Preparing specimens of materials that require testing under compression	12
9	Test environment	12
10	Calibration	12
10.1	Preliminary calibrations	12
10.1.1	Irradiance control system response characteristics	12
10.1.2	Weighing device response time	12
10.1.3	Weighing device output drift	12
10.2	Operating calibrations	13
10.2.1	Weighing device accuracy	13
10.2.2	Heater calibration	13
10.3	Less frequent calibrations	13
10.3.1	Operating heat flux meter calibration	13

11	Test procedure	13
11.1	General precautions	13
11.2	Initial preparation	14
11.3	Procedure	14
12	Calculations	15
12.1	Average mass loss rate	15
13	Test report	16
Annex A (informative) Commentary and guidance notes for operators		18
Annex B (informative) Calculation of Effective Critical Heat Flux for Ignition		19
Annex C (informative) Calibration of the working heat flux meter		20
Bibliography		21