



## Flooring Radiant Panel

EN ISO 9239-1

The EN ISO 9239-1 Flooring Radiant Panel test is the cornerstone of the flooring materials reaction to fire tests in the Euroclass system. The test measures the spread of flame of the product under thermal exposure using a radiant heat ignition source. The thermal exposure is that of a fire growing in the room of origin that through a door opening radiates onto the floorings in an adjacent room or corridor. It is relevant to classification of the flooring material into classes  $A_{2-FL}$ ,  $B_{FL}$ ,  $C_{FL}$  and  $D_{FL}$  as set out in Commission Decision of 8th February 2000 - implementing Council Directive 89/106/EEC. EN ISO 9239-1 applies to floorings. The apparatus can also be used for tests to standards ASTM E648 and DIN 4102; Part 14.

### Features

- Records the Light Attenuation and the Critical Flux at Extinguishment
- Records stack, chamber temperatures and radiant panel temperature
- Stainless steel frame and hood with anodised aluminium sheet finishing
- Contains sliding platform for specimen and an observation window
- Two high quality stainless steel sample holders and a dummy calibration board
- Easy operation of calibrations and testing sequences
- All burners fitted with flash-back protection and electronic flame sensors for enhanced safety
- Pilot line burner according to EN ISO 9239-1
- USB compatible Smoke Measurement System (digital and analogue outputs)
- Calibrated pyrometer and Total Heat Flux meter provided
- Complete operating instructions in English
- CE-marked

## Options

### Data acquisition

- PLC with USB or RS-232 serial interface to computer

### Software

- Windows environment (XP®)
- Automatic report generation
- Detailed graphs
- Semi-automated flux profile measurement
- Time reducing calculations

Computer with FIRE software installed and configured

Compressor and cooling unit for dry compressed air at 10bar (min. 500nl/min)

Exhaust fan for the hood

## What is measured?

- Observed distance of flame spread v. Time, used to determine the critical flux at extinguishment
- Chamber, Stack and radiant panel surface temperature
- Heat flux profile curve
- Smoke density v. time

## Requirements

- Power supply: 230/110 V - 50/60Hz + earth wire
- Dry and clean compressed air at 7 bar, 1/2" (350nl/min)
- Commercial grade propane at 3 bar(A) with a minimum purity of 95% (1kg/hour)
- Water supply and a drain to cool the heat flux meter, <25°C (1l/min)
- Suitable exhaust system, de-coupled from the exhaust stack, whose air velocity should be  $2.5 \pm 0.2$  m/s within the stack with the panel turned off, dummy specimen in place and access door closed. An axial flow fan with a variable extraction rate up to a maximum of 2500 m<sup>3</sup>/h is suitable
- Minimum dimensions of the room must be 2 x 2 x 3 m<sup>3</sup>
- Suitable extinguishing agent readily available.



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