

## Fire Propagation Index Tester

### Application

BS 476 part 6 specifies a method of test, the result being expressed as a fire propagation index, that provides a comparative measure of the contribution to the growth of fire made by an essentially flat material, composite or assembly. It is primarily intended for the assessment of the performance of internal wall and ceiling linings.

### Product parameters

1. Stainless steel box support frame;
2. Calcium silicate board combustion chamber;
3. Three sample holders, stainless steel package;
4. 2 1000W quartz radiator devices provide thermal radiation to the sample;
5. T-type burner, providing open flame combustion mode for the sample;
6. The thermocouple continuously records the difference between the temperature and the room temperature in the chimney;
7. The power output is automatically controlled, and the output power is automatically adjusted according to the test time;
8. The computer automatically processes the data, and can print test reports

### Product Feature

1. Three kinds of sample holders for different thickness of the specimens.
2. Low reflective black finished mild steel Chimney and Cowl assembly complete with thermocouple mounting points.
3. Compliant stainless steel gas burner.
4. Two K type mineral insulated thermocouples complete with ceramic insulators.
5. Two pencil type heaters with 1000w installed in combustion chamber.
6. Control gas instrumentation including electronic gas on/off valve, flow regulating valve, flow meter and manometer.
7. Intelligent single phase power controller with feedback loop for accurate control of electric heating elements
8. DAQ record automatically the mV output from the thermocouples of the flue gases throughout the duration of the test.
9. According to the test time, automatically adjust the output power.

Application: It is mainly used to evaluate the fire performance of wall and ceiling linings.

## Product Details

The BS 476-6 test method is a method for determining the flame propagation properties of materials. It is mainly used to evaluate the fire performance of wall and ceiling linings. The results are expressed in terms of flame propagation index. During the test, the test piece was exposed to a tube torch, and the heat release of the lamp was 530 J/m. After 2 minutes and 45 seconds of the test, the total power of the two electric heaters was adjusted to 1800 watts. When the test was performed for 5 minutes, the power was reduced to 1500 watts, and then the power was maintained until the end of the test. The total test time was 20 minute.

## Data Acquisition system

Prompted software interface

Data recording and display of cowl temperature against time

Data recording and display of ambient temperature against time

Display of power value in kW

Calibration procedure

Calculation of output rise and calibration value

Standard:BS: BS 476-6

Dimension :

Dimensions: Apparatus: 400mm (W) x 600mm x (H) x 300mm (D)

Control module: 400mm (W) x 500mm x (H) x 400mm (D)

Weight:46kg

## Installation requirements

Electrical: 230 volts Nominal 10 Amps

Ambient Temperature: Operating 10°C to 35°C

Gas Supplies: The gas supply specified in the Standard is Standard test gas G112, as specified in BS 4947.

Flow: Gas flow for burner adjustable from 0 to 5 nl/min

Pressure: 1kPa