

## 606 | Candle Type Flammability Tester (Model AC3)



Note: Optional digital barometer (HPA) shown

### ■ APPLICATION

The Candle Type Flammability Tester evaluates the flammability of polymeric materials such as rubber, plastic, and fiber using the oxygen index method.

The test method evaluates the relative flammability of materials by measuring the limiting oxygen concentration (oxygen index) at which a test specimen can barely continue to burn like a candle flame in a slowly rising mixture of oxygen and nitrogen gas.

In particular, Model AC3 is equipped with an oxygen analyzer to provide constant feedback control of the oxygen concentration in reference to ISO 4589-2:2017 / JIS K 7201-2:2021).

### ■ FEATURES

- Tester to determine oxygen index of plastic materials at room temperature by up-down method.
- Up-down method can be easily performed by PC processing.
- Oxygen analyzer included to provide feedback control of oxygen concentration.
- Test results can be saved in MS Excel format.
- If the flame of the sample is not extinguished beyond the standard, it can be extinguished by the fire extinguishing function.
- Burning time can be measured (stopwatch) by remote switch.
- Able to correct for atmospheric pressure for oxygen concentration. (Optional)

## ■ SPECIFICATIONS

Model	AC3
Combustion column	Internal diameter Ø75mm, height 450mm
Column lid	Opening diameter Ø40mm
Glass bead	Diameter Ø4mm
Flow control	Digital Mass Flow Controller (both oxygen and nitrogen)
Total mixed gas flow rate	10.6L/min.
Velocity in cylinder	40mm/s
Measurement accuracy (OI value)	±0.2
Concentration control	15 to 90% (0.1% steps)
Temperature display in column	1°C unit
Oxygen analyzer	Measuring method: magnetic dumbbell type Constant feedback control of oxygen concentration
Concentration range	0 to 100% (O <sub>2</sub> )
Resolution	0.1% (O <sub>2</sub> )
Gas flow rate	700cm <sup>3</sup> /min.
Data acquisition	By PC (Data processing by up-down method) Note: MS Excel is essential but it is not included and this should be provided at user end.
Igniter	Pipe tip inner diameter: 2±1mm, Adjustable to 16±4mm flame
Related standards	ISO 4589-2:2017 JIS K 7201-2:2021
Power supply	Single-phase, AC100V, 50/60Hz, 0.5kVA (or specify)
Dimensions	<ul style="list-style-type: none"> <li>● Main body: W310 x D400 x H600mm</li> <li>● Control unit: W455 x D500 x H250mm</li> <li>● Oxygen analyzer: W150 x D260 x H300mm</li> </ul>
Weight	<ul style="list-style-type: none"> <li>● Main body: Approx. 6kg</li> <li>● Control unit: Approx. 19kg</li> <li>● Oxygen analyzer: Approx. 3.5kg</li> </ul>

## ■OPTIONS

Name	Model
Digital barometer	HPA
Film winding jig	F-1
Sample holder for resin	R-1
Printer	PRT-1
Option without oxygen analyzer (It does not conform to ISO 4589-2:2017, JIS K 7201-1/2:2021)	AC3-N

**Note:**

**Oxygen and nitrogen must be supplied in gas cylinders with a purity of 99.9% or higher.**

*Specifications are subject to change without notice.*

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