



### Compliance with following International Standards

ASTM D1881

### Purpose

This test method covers a simple glassware test for evaluating the tendency of engine coolants to foam under laboratory controlled conditions of aeration and temperature.

### Apparatus Description

The complete set up will be supplied with following parts and accessories.

#### 1. Test cylinder

- Capacity : 500 mL graduated container of heat resistant glass
- Material : Made of Borosilicate glass material
- Diameter : 45 to 50 mm
- Height : 380 mm

#### 2. Magnetic Stirrer with Hot Plate (Heat Source)

- Magnetic stirrer with hot plate will serve the purpose of heating temperature requirements.
- Stirring capacity : 5 Liters
- Speeds range : 100 - 1500 rpm
- Material of hot plate : Porcelain Enamel Hot Plate model
- Temp range : Up to 340 °C
- Temp accuracy :  $\pm 1$  °C
- Temp Sensor : External temperature probe (PT1000) for control of fluid temperature
- Display : Easy to read backlit LCD for display of set & actual parameters
- Monitoring of set & actual temperature / speed
- High accuracy of temperature control with embedded dual sensors
- Last parameter recall, ideal for repetitive processes

Note: Specifications are subject to change.

- Scratch proof & excellent chemical resistance top plate
- A mode for running without external temperature sensor
- B Mode for control of temperature through external sensor
- Advanced Stirrers with microprocessor technology ,
- Unique safety temperature control system
- Constant speed even with change of load / Voltage,
- Settable safe temperature limit to avoid overheating
- Residual Temperature warning when unit is switched off for operator safety

### 3. Spherical Diffuser stone

- Spherical diffuser stone with defined pore diameter as per ASTM D1881 Standard.
- Connection for rubber tubing : A cadmium plated brass nipple fitting serrated for 0.5cm (3/16") rubber tubing
- Material of diffuser stone : Made of Alundum fused crystalline aluminum oxide.
- Permeability @ 2.45 kPa : 3000 to 6400 mL of air/min
- Pore diameter : not greater than 80 Micro meter
- Diffuser stone diameter : 1 inch (25.4 mm)
- Connection for rubber tubing : A cadmium plated brass nipple fitting serrated for 0.5cm (3/16") rubber tubing

### 4. Supply tubing

- Aerator tube having diameter of 1 inch (25.4 mm) for gas diffuser stone. This tube is connected to the spherical diffuser stone to supply the air pressure from pump.
- 5) Flow meter
- Rotameter assembly with flow control valve capable of maintaining the flow of  $1000 \pm 25$  mL/min through spherical diffuser stone.

### 6. Digital stop watch

- Digital stop watch for observing and calculating time for gas supply through flow meter and for foam breakdown.

### 7. Air source (Air compressor)

- A clean and dry source, free from grease and other contaminants, capable of maintaining the prescribed flow rate as per ASTM D1881 requirement through the diffuser stone.

### 8. Rigid base support

- Entire setup is mounted on metal rigid frame which is powder coated in attractive shades.

### 9. Thermometer

- ASTM Partial Immersion Thermometer number 1C having a range from  $-20$  to  $+150^{\circ}\text{C}$  ( $0$  to  $302^{\circ}\text{F}$ )

Note: Specifications are subject to change.