



## FOAMING TENDENCIES OF ENGINE COOLANT - (ASTM D1881)

### 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 : ± 1 °C
- Temp Sensor : External temperature probe (PT-1000) 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
- 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

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I.T. PAN No. : AABCE 4018L  
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### 3) Spherical Diffuser stone

- Spherical diffuser stone with defined pore diameter as per ASTM D-1881 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°C (0 to 302°F)

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