

KES

Evaluation Standard for Cloud point in Fuel

KES T – L430

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1. Scope of Application

This standard shall be applied to petroleum oils that forms clearly visible layer of thickness of 38 mm at cloud point under 49 °C (120 °F).

2. Summary

Test sample is cool at specified rate and evaluated regularly. Cloud point is decided when cloud form from the bottom of the container.

3. Significance

Cloud point of petroleum oil is the lowest temperature usable.

4. Apparatus (Refer to Figure 1)

4.1 Test Jar

Cylindrical jar made of glass that has 30~33.5 mm inner diameter, and 115~125 mm height. The jar should be clear and has flat bottom. There should be a mark at 54±3 mm from the bottom of the jar.

4.2 Thermometer

Standard Thermometer stated in 1E or 1P. It has range required below.

Thermometer	Temperature Range	Thermometer Number	
		ASTM	2P
High Cloud Point	38~50 °C	5C	1C
Pour Point	-36~120 °F	5F	1F
Low Cloud Point	80~120 °C	6C	2C
Pour Point	-112~70 °F	6F	2F

4.3 Cork

It seals the sample jar and located the thermometer in the center

4.4 Jacket

It has inner diameter of 50 mm, depth of 115 mm. Has flat surface, made from glass or metal. It can not be bigger than 25 mm of cooling medium so that it is fix without shaking, standing vertically in the cooling bath (4.7)

4.5 Disk

Cork or felt to fix the inside of the jacket loosely at thickness of 6 mm

4.6 Gasket

Used to fix the inside of the jacket and outside of the test jar safely. It is made from rubber or leather or other material to be bonded with the shape of the test container. Purpose of gasket is to protect the test container.

4.7 Bath

It firmly supports the vertical jacket and keeps the temperature at stated level. Temperature of required bath should be kept by a refrigerator if possible.

Note 1. Following mixture is used to decrease the temperature

- Ice and water : 10 °C (50 °F)
- Crushed ice and sodium crystal : -12 °C (10 °F)
- Crushed ice and Calcium Chloride crystal : -26 °C (-50 °F)
- Acetone, alcohol or Petroleum Naphtha(Refer to Section 6) : -57 °C (-70 °F)
- Following solid is used to keep the temperature required