



DROP POINT OF GREASE **(AS PER IP – 31 SPECIFICATION)**

DROP POINT APPARATUS



SCOPE :

This method determines the drop point of greases. In general, the drop point is an indication of the temperature of transition from the solid or semi-solid to the liquid state and does not necessarily have any bearing upon service performance.

DEFINATION :

The drop point is the temperature at which a drop of the sample first detaches itself from the main bulk. When it is steadily heated under closely specified conditions. In some cases a drop does not become detached and the sample flows in a continuous stream. The drop point is then the temperature recorded when the stream has travelled a specified distance.

OUTLINE OF METHOD :

The sample contained in a metal cup is heated until it softens sufficiently for a drop to fall from the cup.

PROCEDURE :

- (A) By means of spatula, fill the cup with the sample and cut away any excess material. Take precautions to exclude air bubbles, but do not melt the grease.
- (B) Push the cup, without lateral movement, into the metal case as far as the stop and cut away any excess material squeezed out of the bottom. Take care that the apertures D in the side of the metal case are not blocked. Fit the thermometer, with the cup attached, centrally in the boiling tube, through a bored cork having a side notch, so that the bottom of the cup is 25 ± 1.0 mm above the bottom in the beaker containing the liquid heating medium, so that two thirds of its length is immersed and the bottom is about 25mm above the bottom of the beaker.
- (C) Heat the liquid bath keeping it stirred, at such a rate that the drop point thermometer shows a rise in temperature of 1°C per min for 20°C below the drop point of the sample. Record the temperature at which the first drop, whatever its composition, falls from the cup or at which the continuous stream of material, if formed reaches the bottom of material, if formed reaches the bottom of the boiling tube.

REPORTING :

Report the temperature recorded in section 5© to the nearest 1°C as the Drop Point, IP 31.

PRECISION :

Results of duplicate tests should not differ by more than the following amounts.

GREASE TYPE	REPEATABILITY	REPRODUCIBILITY
LIME BASE GREASE	2°C	4°C
SODA BASE GREASE	5°C	10°C
OTHER GREASES	NOT ESTABLISHED	NOT ESTABLISHED