

INTERNATIONAL STANDARD

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Petroleum products — Determination of pour point

Produits pétroliers — Détermination du point d'écoulement



Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 3016 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This second edition cancels and replaces the first edition (ISO 3016:1974), which has been technically revised.

Annex A forms an integral part of this International Standard.

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Petroleum products — Determination of pour point

WARNING — The use of this International Standard may involve hazardous materials, operations and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies a method for the determination of the pour point of petroleum products. A separate procedure suitable for the determination of the lower pour point of fuel oils, heavy lubricant base stock, and products containing residual fuel components is also described.

NOTE 1 A method for the pour point of crude oils is under development. The pour point of crude oils may be determined by the general procedure described in this International Standard, but some crude oils may need a modified pretreatment to avoid the loss of volatile material. The precision in this International Standard was derived on a sample matrix that did not include crude oils (see note 5).

2 Definition

For the purposes of this International Standard, the following definition applies.

2.1 pour point: Lowest temperature at which a sample of petroleum product will continue to flow when it is cooled under specified standard conditions.

3 Principle

After preliminary heating, the sample is cooled at a specified rate and examined at intervals of 3 °C for flow characteristics. The lowest temperature at which movement of the sample is observed is recorded as the pour point.

4 Reagents and materials

4.1 Sodium chloride (NaCl), crystals.

4.2 Calcium chloride (CaCl₂), crystals.

4.3 Carbon dioxide (CO₂), solid.

4.4 Coolant liquid: acetone, methanol or petroleum naphtha.

4.5 Wiping fluid: acetone, methanol or ethanol.

5 Apparatus (see figure 1)

5.1 Test jar, cylindrical, of clear glass, flat-bottomed, 33,2 mm to 34,8 mm outside diameter and 115 mm to 125 mm in height. The test jar shall have an inside diameter of 30,0 mm to 32,4 mm, with the constraint that the wall thickness be no greater than 1,6 mm. The jar shall be marked with a line to indicate a contents level 54 mm ± 3 mm above the inside bottom.

5.2 Thermometers, partial immersion type conforming to the specifications given in annex A.

5.3 Cork, to fit the test jar, bored centrally to take the test thermometer.