

INTERNATIONAL STANDARD

ISO
2176

Second edition
1995-03-15

Petroleum products — Lubricating grease — Determination of dropping point

*Produits pétroliers — Graisses lubrifiantes — Détermination du point de
goutte*

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Reference number
ISO 2176:1995(E)

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 2176 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This second edition cancels and replaces the first edition (ISO 2176:1972), which has been technically revised.

Annex A forms an integral part of this International Standard.

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Introduction

In general, the dropping point of a lubricating grease is the temperature at which the grease passes from a semisolid to a liquid state under the conditions of test. This change in state is typical of greases containing soaps of conventional types as thickeners. Greases containing materials other than conventional soaps as thickeners may, without change in state, exhibit oil separation.

Cooperative testing indicates that results determined by this International Standard are generally in agreement with those obtained by the method, to be given in a future International Standard on lubricating greases, for the determination of dropping point (wide temperature range). In cases where results differ, there is no known significance. However, agreement between producer, consumer and supplier as to the test method to be used is advisable.

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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 dropping point of lubricating grease.

NOTE 1 Results of the dropping point test may be used as an indication of the maximum temperature to which a grease can be exposed without complete liquefaction or excessive oil separation, for indication of the grease as to type, and for establishment of manufacturing or quality control limits for this characteristic. Results should not be considered as having any direct bearing on service performance unless such correlation has been established.

2 Definition

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

2.1 dropping point: Temperature at which a drop of lubricating grease is extruded from the bottom of a specialized cup under the conditions of this test.

NOTE 2 For certain greases, the temperature recorded is that when the first portion of extruded material touches the bottom of the test tube holding the cup.

3 Apparatus

3.1 Grease cup, of chromium-plated brass, conforming to the dimensions given in figure 1.

3.2 Test tube, of heat-resistant borosilicate glass, with rim, conforming to the dimensions shown in figure 2. The tube shall have three indentations on the circumference to support the grease cup at about the point shown in figure 2.

3.3 Thermometers, partial immersion type, conforming to the specification given in annex A.

3.4 Oil bath, consisting of a 400 ml beaker filled with a suitable oil to such a level to permit the test tube (3.2) to be suspended to the correct depth (see 4.5), but allowing for expansion of the fluid at the upper limit of the fluid's operation.

3.5 Ring stand and ring, for support of the oil bath.

3.6 Cup plug gauge, as illustrated in figure 3.

3.7 Thermometer depth gauge, as illustrated in figure 4.