
Determination of flash and fire points — Cleveland open cup method

*Détermination des points d'éclair et de feu — Méthode Cleveland à vase
ouvert*



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Contents

Page

Foreword.....	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle.....	2
5 Reagents and materials	2
6 Apparatus	2
7 Preparation of apparatus	2
8 Sampling.....	3
9 Sample handling	3
10 Procedure for determining flash point	4
11 Procedure for determining fire point	5
12 Calculation.....	5
13 Expression of results	5
14 Precision.....	5
15 Test report	6
Annex A (normative) Cleveland open cup apparatus.....	7
Annex B (normative) Thermometer specification.....	10
Annex C (informative) Verification of apparatus.....	11
Bibliography.....	14

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 2592 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This second edition cancels and replaces the first edition (ISO 2592:1973), which has been technically revised.

Annexes A and B form a normative part of this International Standard. Annex C is for information only.

Determination of flash and fire points — Cleveland open cup method

WARNING — The use of this International Standard may involve hazardous materials, operations and equipment. This International Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this International 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 procedure for the determination of flash and fire points of petroleum products using the Cleveland open cup apparatus. It is applicable to petroleum products having an open cup flash point above 79 °C, except fuel oils, which are most commonly tested by the closed cup procedure described in ISO 2719 [1].

NOTE Flash point and fire point are indications of the ability of a substance to form a flammable mixture with air under controlled conditions, and then to support combustion. They are only two of a number of properties that may contribute towards the assessment of overall flammability and combustibility of a material.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3170:1988, *Petroleum liquids — Manual sampling*.

ISO 3171:1988, *Petroleum liquids — Automatic pipeline sampling*.

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

3.1

flash point

lowest temperature of the test portion, corrected to a barometric pressure of 101,3 kPa, at which application of a test flame causes the vapour of the test portion to ignite and the flame to propagate across the surface of the liquid, under the specified conditions of test

3.2

fire point

lowest temperature of the test portion, corrected to a barometric pressure of 101,3 kPa, at which application of a test flame causes the vapour of the test portion to ignite and sustain burning for a minimum of 5 s under the specified conditions of test