

Australian Standard<sup>®</sup>

**Determination of flash and fire points—  
Cleveland open cup method**



This Australian Standard® was prepared by Committee CH-009, Safe Handling of Chemicals. It was approved on behalf of the Council of Standards Australia on 30 June 2006. This Standard was published on 24 July 2006.

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The following are represented on Committee CH-009:

- Australasian Fire Authorities Council
  - Australian Paint Manufacturers' Federation
  - AVCARE
  - Consumers' Federation of Australia
  - Department for Administrative and Information Services, SA
  - Department of Conservation and Environment, NSW
  - Department of Consumer and Employment Protection, WA
  - Department of Emergency Services, QLD
  - New Zealand Chemical Industry Council
  - Plastics and Chemicals Industries Association, Australia
  - Trans NZ
  - Victorian WorkCover Authority
- 

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## PREFACE

This Standard was prepared by Standards Australia/Standards New Zealand Committee CH-009, Safe Handling of Chemicals. It is identical with, and has been reproduced from ISO 2592:2000, *Determination of flash and fire points—Cleveland open cup method*.

The objective of this Standard is to provide a method for the determination of open-cup flash and fire points using the Cleveland (open cup) apparatus.

As this Standard is reproduced from an International Standard, the following modifications apply:

- (a) Its number does not appear on each page of text and its identity is shown on the cover and title page.
- (b) In the source text, ‘this International Standard’ should read ‘this Australian Standard’.
- (c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to equivalent Australian Standards as follows:

<i>Reference to International Standard</i>		<i>Reference to Australian Standard</i>	
ISO		AS	
2719	Petroleum products and lubricants— Determination of flash point— Pensky-Martens closed cup method	2106	Methods for the determination of the flash point of flammable liquids (closed cup)
		2106.2	Part 2: Determination of flash point—Pensky-Martens closed cup method
Guide 33	Uses of certified reference materials	HB 19	Reference materials
		19.33	Guide 33: Uses of certified reference materials
Guide 35	Certification of reference materials— General and statistical principles	19.35	Guide 35: Certification of reference materials—General and statistical principles

Other International Standards referenced in the source document have not been adopted as Australian Standards.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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## AUSTRALIAN STANDARD

# 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