

INTERNATIONAL  
STANDARD

ISO  
2977

Third edition  
1997-07-15

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**Petroleum products and hydrocarbon  
solvents — Determination of aniline point  
and mixed aniline point**

*Produits pétroliers et solvants hydrocarbonés — Détermination du point  
d'aniline et du point d'aniline en mélange*



Reference number  
ISO 2977:1997(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 2977 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This third edition cancels and replaces the second edition (ISO 2977:1989), which has been technically revised, in particular with the inclusion of annex F.

Annexes A to F form an integral part of this International Standard.

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Printed in Switzerland

# Petroleum products and hydrocarbon solvents — Determination of aniline point and mixed aniline point

**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 method for the determination of the aniline point of petroleum products and hydrocarbon solvents, and the mixed aniline point of those products having aniline points below the temperature at which aniline will crystallize from the aniline-sample mixture.

Method 1 describes a procedure for transparent samples with an initial boiling point above ambient temperature, and for those with an aniline point below the bubble point and above the solidification point of the aniline-sample mixture.

Method 2, a thin film method, describes a procedure for samples too dark for testing by method 1.

Methods 3 and 4 are for samples that may vaporize appreciably at the aniline point.

NOTE 1 Method 4 is particularly suitable where only small quantities of sample are available.

Method 5 describes a procedure using automated or automatic apparatus suitable for the range covered by methods 1 and 2.

NOTE 2 The aniline point (or mixed aniline point) is useful as an aid in the characterization of pure hydrocarbons and in the analysis of hydrocarbon mixtures. Aromatic hydrocarbons exhibit the lowest values and paraffins the highest, with cycloparaffins and olefins exhibiting intermediate values. In a homologous series, the aniline points increase with increasing molecular mass.

NOTE 3 Although the aniline point can be used in combination with other physical properties in correlative methods for hydrocarbon analysis, the most frequent usage is to provide an estimate of the aromatic content (or "aromaticity") of hydrocarbon mixtures.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the