INTERNATIONAL STANDARD

ISO 9957-2

Second edition
2019-11

Fluid draughting media —

Part 2: Water-based non-India ink — Requirements and test conditions

Fluides à dessin —

Partie 2: Encres aqueuses autres que les encres de Chine — Prescriptions et conditions d'essai

Reference number
ISO 9957-2:2019(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 10, *Technical product documentation*.

This second edition cancels and replaces the first edition (ISO 9957-2:1995), of which it constitutes a minor revision. The changes to the previous edition are as follows:

— references updated;

— minor editorial changes.

A list of all parts in the ISO 9957 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Fluid draughting media —

Part 2: Water-based non-India ink — Requirements and test conditions

1 Scope

This document specifies the requirements and test conditions for water-based non-India inks intended for use in draughting instruments and intended for use on natural tracing paper conforming to ISO 9961, to provide for black line technical drawings.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5-2, *Photography and graphic technology — Density measurements — Part 2: Geometric conditions for transmittance density*

ISO 5-4, *Photography and graphic technology — Density measurements — Part 4: Geometric conditions for reflection density*

ISO 2240, *Photography — Colour reversal camera films — Determination of ISO speed*

ISO 9177-2, *Mechanical pencils — Part 2: Black leads — Classification and dimensions*

ISO 9961, *Draughting media for technical drawings — Natural tracing paper*

ISO 10209, *Technical product documentation — Vocabulary — Terms relating to technical drawings, product definition and related documentation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10209 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
non-India ink
black water-based draughting fluid that contains a colourant such as (but not limited to) dyes, dispersions of dyes or microfine organic pigments, but does not contain carbon black as its primary colourant

Note 1 to entry: A non-India ink does not conform to all the requirements of ISO 9957-1.

4 Requirements

Drawings made with non-India ink may not necessarily be reproducible using conventional reproduction techniques (e.g. blueprint, exposure and microfilm printing, photographic reproduction, electrostatic processing) due to the spectral response of the imaging process and the spectral absorption and reflectance characteristics of the non-India ink line.

This document specifies the quality requirements of non-India ink lines as follows:

— line width (see 5.4.2);

— optical density (see 5.4.3);

NOTE The measured optical density does not guarantee the reproducibility.

— drying time (see 5.4.4);

— adhesion (see 5.4.5);

— erasability/redraughtability (see 5.4.6);

— resistance to water (see 5.4.7); and

— fade resistance (see 5.4.8).

Lines (and characters) drawn with non-India ink are not as fade-resistant as India ink lines and consequently cannot be used to produce archival-quality documents. The use of non-India inks is not recommended to produce or modify original drawings which need to be highly resistant to ageing factors such as oxygen, humidity, light and temperature.

The graphical and mechanical qualities of a non-India ink in its original container shall be preservable for at least two years at the storage conditions recommended by the supplier, starting from the date of manufacture, which shall be written on a label attached to the container.

5 Test parameters, test conditions and performance

5.1 Basic test concept

Test lines of non-India ink are drawn on natural tracing paper in accordance with 5.4.

5.2 Atmospheric conditions for testing

The tests shall be carried out under standard test atmosphere 23/50 (see ISO 554).

5.3 Test equipment and accessories

5.3.1 Test machine

The test machine shall be an electromechanical line-drawing device permitting the adjustment of:

— angle;

— writing load;

— speed; and

— line pitch.