INTERNATIONAL STANDARD

ISO 12040

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Graphic technology — Prints and printing inks — Assessment of light fastness using filtered xenon arc light

Technologie graphique — Impressions et encres d'imprimerie — Évaluation de la solidité à la lumière au moyen d'une lampe à arc au xénon munie d'un filtre

Reference number
ISO 12040:1997(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 12040 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

Annex A of this International Standard is for information only.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

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Introduction

The method for evaluating light fastness described in this International Standard using blue wool references is in technical conformity with the method given in ISO 2835. However, according to the latter, natural daylight shall be used to obtain a valid assessment of light fastness. This International Standard describes an accelerated test method by specifying the light source and filters for daylight simulation as well as exposure of the test samples to artificial daylight.

In addition, this International Standard is partly in agreement with ISO 105-B02. For more information on apparatus and test methods, ISO 105-B02 is recommended as a reference.

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Graphic technology — Prints and printing inks — Assessment of light fastness using filtered xenon arc light

1 Scope

This International Standard specifies a method for assessing the light fastness of prints and printing inks, by giving

— the general test requirements for prints;

— the special test requirements for inks.

This International Standard applies to all print substrates such as paper, board, metals (thin metal sheets and plate) and plastic films and to all printing processes.

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 possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 105-A02:1993, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour.*

ISO 105-B02:1994, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test.*

ISO 2834:1981, *Printing inks — Preparation of standardized prints for determination of resistance to physical and chemical agents.*

ISO 3664:1975, *Photography — Illumination conditions for viewing colour transparencies and their reproductions.*

3 Definitions

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

3.1 light fastness of prints to filtered xenon arc light: Resistance of the print to the effects of a fixed light source (filtered xenon arc light) without direct influence from the weather.

3.2 light fastness of a printing ink: Resistance of a standard print assessed in accordance with the instructions given in this International Standard relating to prints.