



BSI Standards Publication

Graphic technology — Colour conformity of printing workflows

National foreword

This British Standard is the UK implementation of [ISO 19302:2018](#).

The UK participation in its preparation was entrusted to Technical Committee PAI/43, Graphic technology.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2018
Published by BSI Standards Limited 2018

ISBN 978 0 580 96551 7

ICS 37.100.01

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 December 2018.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

INTERNATIONAL STANDARD

ISO
19302

First edition
2018-12-06

Graphic technology — Colour conformity of printing workflows



Reference number
ISO 19302:2018(E)
Documents
Document Sharing Hub
© ISO 2018



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Printing workflow requirements	3
4.1 Job colour definition	3
4.1.1 General	3
4.1.2 Digital file creation	4
4.1.3 Graphic content	4
4.1.4 Spot colour and device colour build	4
4.2 Process colour reproduction	5
4.2.1 Colour management	5
4.2.2 Prepress	6
4.2.3 Process control	6
4.3 Product colour conformity	7
4.3.1 General	7
4.3.2 Print control	7
4.3.3 Colour control	7
5 Printing workflow standards requirements	8
5.1 Job colour definition	8
5.1.1 Digital file creation	8
5.1.2 Validation print production	8
5.1.3 Proofing	8
5.2 Process colour reproduction	8
5.2.1 Colour management	8
5.2.2 Prepress	9
5.2.3 Prepress for commercial printing	9
5.2.4 Prepress for packaging printing	9
5.2.5 Process control	9
5.3 Product colour conformity	9
5.3.1 Print control	9
5.3.2 Colour control	10
5.4 Measurement conditions	10
5.4.1 General	10
5.4.2 Measurement conditions for commercial printing	11
5.4.3 Measurement conditions for packaging printing	11
5.5 Viewing and illumination	11
5.6 Sampling	11
6 Scoring schema	12
7 Reporting	12
Annex A (informative) Colour control	13
Annex B (informative) Information exchange	14
Annex C (informative) Typical scoring schemas	15
Bibliography	17

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 130, *Graphic technology*.

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.

Introduction

The printing industry comprises a variety of workflows that produce a variety of printed products. For tone and colour reproduction, many ISO standards specify aims and tolerances and they are necessary for the implementation of a colour-managed and standardized workflow.

Even though relevant standards can specify aims and tolerances, the printer's ability to demonstrate conformity of their entire production workflow to these standards often becomes a technical issue as well as a business issue.

Printed colour reproduction quality depends on printing workflow operation. Printing workflow operation is made up of colour definition (what colour to specify), process colour reproduction requirements (what to control) and colour conformity (verify the outcome of the process).

There is a need to provide printers, suppliers, customers and independent bodies with guidelines that will allow them to implement and/or assess a printing workflow in order to achieve and demonstrate conformity of printed products.

This document recognizes and makes provisions for the following:

- a) conditions and test methods for file generation conformity;
- b) conditions and test methods for file colour separation conformity;
- c) conditions and test methods for spot colour and/or composite colour conformity;
- d) conditions and test methods for soft proofing conformity;
- e) conditions and test methods for hard proofing conformity;
- f) conditions and test methods for viewing conditions conformity;
- g) conditions and test methods for the evaluation of process, print and colour conformity with respect to specified reference printing conditions (RPCs).

This document is applicable to all printing applications including CMYK, CMYK + spot, spot only, non-CMYK-based processes and multicolour printing.

This document defines the three main production stages of a printed product as follows:

- 1) colour definition: the first stage where the customer and design services choose the desired brand and visual colours;
- 2) colour reproduction: the production process which starts upon reception of the job file and ends when the job is printed;
- 3) colour conformity: the stage which is necessary for the evaluation of the conformity of a printed job.

This document provides:

- a reference framework description for a typical standardized printing workflow (CMYK, CMYK with spot, non CMYK, spot only and multicolour);
- required International Standards applicable at each stage of a standardized printing workflow;
- a description of expected setup, calibration and process control operations required at each stage of printing workflow according to the appropriate International Standards;
- a definition of test conditions for colour conformity activities when these are not clearly mentioned in the relevant standard.

This page deliberately left blank