
**Graphic technology — Processless
lithographic plates —**

**Part 1:
Evaluation methods for characteristics
and performance**

*Technologie graphique — Plaques lithographiques sans traitement —
Partie 1: Méthodes d'évaluation des caractéristiques et des
performances*

Document Preview

[ISO 24487-1:2021](https://standards.iteh.ai/catalog/standards/iso/5a52545e-974f-4eef-88d7-56373e3e8c61/iso-24487-1-2021)

<https://standards.iteh.ai/catalog/standards/iso/5a52545e-974f-4eef-88d7-56373e3e8c61/iso-24487-1-2021>



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO 24487-1:2021](https://standards.iteh.ai/catalog/standards/iso/5a52545e-974f-4eef-88d7-56373e3e8c61/iso-24487-1-2021)

<https://standards.iteh.ai/catalog/standards/iso/5a52545e-974f-4eef-88d7-56373e3e8c61/iso-24487-1-2021>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, 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
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Test procedure	2
4.1 General.....	2
4.2 Test environment.....	2
4.3 Plate imaging.....	2
4.4 Pre-dampening amount.....	4
4.5 Pre-inking amount.....	4
4.6 Ink selection.....	4
4.7 Substrate selection.....	4
4.8 Fountain solution.....	5
4.9 Press preparation and control.....	5
4.9.1 Press preparation print run.....	5
4.9.2 Reference printing aim values.....	5
4.10 Printing method.....	6
4.11 Plate exposure to light.....	6
5 Assessment methods	6
5.1 General.....	6
5.2 On-press development.....	6
5.2.1 Number of sheets required for on-press development.....	6
5.2.2 Assessment of non-image area.....	7
5.2.3 Assessment of solid area.....	8
5.2.4 Assessment of intermediate tones.....	8
5.3 Abrasion resistance.....	9
5.4 Resistance to toning.....	9
5.5 Chemical resistance.....	11
5.5.1 General.....	11
5.5.2 Rub test.....	12
5.5.3 Drop test.....	12
5.6 Plate performance for stop and restart.....	12
6 Reporting requirements	12
Annex A (informative) Examples of measurement method and results	14
Annex B (informative) Example of evaluation results and classification	26
Annex C (informative) Examples of quality grade reporting	27
Bibliography	29

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*.

A list of all parts in the ISO 24487 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.

Introduction

Processless plates represent a simple way to prepare plates in prepress. Once a plate has been imaged, it is mounted directly on the press where the plate coating is removed on start-up of the press. This approach eliminates the plate processor, associated chemistry, energy required to power the processor, water, and waste from plate preparation.

Perceived benefits of processless plates include ease of use and improved speed of production compared to traditional plate preparation systems since there is no need for a plate processor or finishing unit. Processless plates are mounted directly on press once imaged. Since costs associated with processors and finishing units, including developer and cleaning solution, time and labour are eliminated, printing using processless plates is perceived as a low-cost method.

The unique characteristic of processless plates is on-press development. After the exposure process by computer to plate (CTP) exposing equipment, the non-image area of the photosensitive layer is physically removed along with the ink and the fountain solution of the press.

The removal procedure is as follows.

- When the press is started, fountain solution and ink are applied. The fountain solution permeates the unexposed (non-image) area of the photosensitive layer. The unexposed photosensitive layer is then peeled from the base material by the viscosity of the printing ink.
- This peeled photosensitive layer is finely dispersed into the ink which is discharged on paper from the press in the usual way. Parts of the peeled layer are also discharged into the fountain solution.

ITeH Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO 24487-1:2021](https://standards.iteh.ai/catalog/standards/iso/5a52545e-974f-4eef-88d7-56373e3e8c61/iso-24487-1-2021)

<https://standards.iteh.ai/catalog/standards/iso/5a52545e-974f-4eef-88d7-56373e3e8c61/iso-24487-1-2021>