
**Information technology — Print
cartridge characterization —**

**Part 1:
General: terms, symbols, notations and
cartridge characterization framework**

*Technologies de l'information — Caractérisation de cartouche
d'impression —*

*Partie 1: Généralités: termes, symboles, notations et cadre de travail
de caractérisation de cartouche*



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2013

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
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web 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 Requirements	7
5 Structure of ISO/IEC 29142	8
5.1 Data Reporting.....	8
5.2 Environmental.....	8
5.3 Toner and ink cartridge characterization.....	9
6 Framework Overview for cartridge characterization	9
6.1 Elements of a print system.....	9
6.2 Cartridge configurations.....	10
6.3 Performance attributes measured on a printed page.....	10
6.4 Physical attributes.....	11
7 Attribute framework for testing and characterizing cartridges	11
7.1 Overview.....	11
7.2 Special considerations for binomial and continuous performance point attributes.....	13
7.3 Special considerations for point and lifetime binomial attributes.....	13
7.4 Special considerations for performance testing with page attribute values.....	13
7.5 Test requirements for all attributes.....	15
7.6 Test methodology for lifetime and point attributes.....	19
8 Framework requirements for determination of declared attribute values	22
8.1 Determination of the declared value for continuous lifetime or continuous physical attributes.....	22
8.2 Determination of the declared value for continuous point attributes.....	23
8.3 Determination of the declared value for lifetime, point and physical binomial attributes.....	24
9 Framework requirements for reporting cartridge characterization results	24
Annex A (informative) Terms cross-reference	25
Bibliography	28

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 29142-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 28, *Office equipment*.

Introduction

The purpose of this part of ISO/IEC 29142 is to define the framework for characterizing ink and toner cartridges used in printing devices that have a digital input printing path, including multi-function devices. This part of ISO/IEC 29142 defines terms, symbols, and notations used throughout the ISO/IEC 29142 series to characterize such ink and toner cartridges.

Customer information related to ink and toner cartridges is not consistent in the global marketplace.

Cartridge manufacturers, including original, non-original manufacturers, refillers, and remanufacturers, have each communicated expressions of cartridge characteristics.

The ISO/IEC 29142 series is provided to aid transparency between manufacturers, suppliers and their customers regarding selected cartridge characteristics. The selected cartridge characteristics do not provide for an exhaustive cartridge characterization. Where applicable, cartridge attributes and the associated characterization tests are used consistently with both ink and toner cartridge technologies. The selected cartridge attributes are defined for all cartridges, regardless of manufacturing methodology.

This is a preview - click here to buy the full publication

Information technology — Print cartridge characterization —

Part 1: General: terms, symbols, notations and cartridge characterization framework

1 Scope

This part of ISO/IEC 29142 establishes terms, symbols, notations and a framework for characterizing toner and ink cartridges used in printing devices that have a digital input printing path, including multi-function devices. This part of ISO/IEC 29142 is intended for equipment used in office environments.

It primarily provides a foundation for measuring, evaluating, or specifying characteristics of such toner and ink cartridges.

The terms, symbols, notations and framework established herein can be applied to such cartridges.

The characterizations associated with the terms, symbols, notations, and framework established herein are specified throughout the ISO/IEC 29142 series.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13655, *Graphic technology — Spectral measurement and colorimetric computation for graphic arts images*

ISO 5-3, *Photography and graphic technology — Density measurements — Part 3: Spectral conditions*

ISO/IEC 29142-2, *Information technology — Print cartridge characterization — Part 2: Cartridge characterization data reporting*

ISO/IEC 29142-3, *Information technology — Print cartridge characterization — Part 3: Environment*