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**Information technology — Print  
cartridge characterization —**

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

*Technologies de l'information — Caractérisation des cartouches  
d'impression —*

*Partie 1: Généralités : termes, symboles, notations et cadre pour la  
caractérisation des cartouches*





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## 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.

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 document 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](http://www.iso.org/directives) or [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs)).

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. 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](http://www.iso.org/patents)) or the IEC list of patent declarations received (see [patents.iec.ch](http://patents.iec.ch)).

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](http://www.iso.org/iso/foreword.html). In the IEC, see [www.iec.ch/understanding-standards](http://www.iec.ch/understanding-standards).

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

This second edition cancels and replaces the first edition (ISO/IEC 29142-1:2013), which has been technically revised.

The main changes compared to the previous edition are as follows:

- revision of the term “black-only printer” in order to harmonize with ISO/IEC 22505.

A list of all parts in the ISO/IEC 29142 series can be found on the ISO and IEC websites.

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](http://www.iso.org/members.html) and [www.iec.ch/national-committees](http://www.iec.ch/national-committees).

## Introduction

The purpose of this document 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 document 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 allow 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.

# Information technology — Print cartridge characterization —

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

### 1 Scope

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

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

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