
**Information technology — Print
cartridge characterization —**

**Part 2:
Cartridge characterization data
reporting**

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

Partie 2: Rapport de données de caractérisation de cartouche



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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. 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 29142-2 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 provide consistent documentation and reporting methods, for customer understanding, for the cartridge characterization test methods and provisions of ISO/IEC 29142. Specifications for notification and reporting applicable for the ink and toner cartridge attribute characterization methods established in ISO/IEC 29142, and the environmental provisions established in ISO/IEC 29142-3, are given in this part of ISO/IEC 29142.

Attributes characterized according to ISO/IEC 29142 standardized or specified test methods that comply with the test method requirements defined in ISO/IEC 29142-1, and environmental evaluations additionally in compliance with the provisions of ISO/IEC 29142-3, after inclusion in ISO/IEC 29142-2, [Annex A](#), can be chosen for reporting, based on the manufacturer decision regarding the importance of the attributes and provisions to the intended customer. This part of ISO/IEC 29142 defines the documentation and reporting that are required to be used, if such an attribute is chosen to be characterized and reported.

Such reported attributes and provisions do not provide for a complete cartridge attribute characterization; however, the consistent information provided for each attribute, and the consistent testing underlying that information, enables comparison of provided provisions and attribute characterization results.

Information technology — Print cartridge characterization —

Part 2: Cartridge characterization data reporting

1 Scope

This part of ISO/IEC 29142 establishes the product and package labelling, and related reporting provisions for 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.

This part of ISO/IEC 29142 defines the information requirements for the cartridge characterization documentation on packaging and cartridges, and in reports.

The labels, notifications, and reports established herein are specified in accordance with the terms, symbols, notations and framework of ISO/IEC 29142-1. The cartridge characterization tests that determine the test report information of the labels, notifications, and reports established herein are standardized or specified in parts of 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/IEC 19752, *Information technology — Method for the determination of toner cartridge yield for monochromatic electrophotographic printers and multi-function devices that contain printer components*

ISO/IEC 19798, *Method for the determination of toner cartridge yield for colour printers and multi-function devices that contain printer components*

ISO/IEC 24711, *Method for the determination of ink cartridge yield for colour inkjet printers and multi-function devices that contain printer components*

ISO/IEC 29142-1, *Information technology — Print cartridge characterization — Part 1: General: terms, symbols, notations and cartridge characterization framework*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 29142-1 and the following apply.

3.1

cartridge attribute checklist

list of available cartridge characterization tests, containing the defining standard or specification identifier, the attribute name, and the test result availability indicator, for each standardized or specified ISO/IEC 29142 cartridge characterization test to be provided in each customer report with a yes or no indication of whether cartridge characterization results are available for each of the listed tests

3.2

cartridge attribute test report

report including the information of a cartridge customer report and the detailed cartridge characterization results of an ISO/IEC 29142 cartridge characterization test reported for customer presentation according to a required format

Note 1 to entry: The format is prescribed according to each ISO/IEC 29142 standardized or specified cartridge characterization test and is in compliance with ISO/IEC 29142-2.

3.3

cartridge collector

any party providing a cartridge take-back or collection program

EXAMPLE A business entity designated to collect cartridges.

3.4

cartridge identifier

formatted human readable arrangement of information uniquely specifying a distinct cartridge

3.5

cartridge label

formatted human readable arrangement of information containing at least the cartridge identifier, displayed on the cartridge and also on the cartridge package in the case of retail cartridge packaging

3.6

cartridge notification

human readable information to be included in accordance with ISO/IEC 29142 and, presented according to ISO/IEC 29142-2, containing at least the cartridge identifier, the cartridge supplier identification, and the cartridge colourant information, primarily located on cartridge packaging

3.7

cartridge packaging

<retail> containment and customer information materials surrounding a cartridge placed for direct customer purchase

3.8

cartridge packaging

<bulk> containment materials surrounding a cartridge for shipping, not intended for direct customer purchase

3.9

cartridge supplier

cartridge marketer, manufacturer, remanufacturer, refiller, or distributor, being the party or parties responsible for marketing the cartridge and providing customer support for the cartridge

3.10

customer report

report, including a cartridge notification, and a cartridge attribute checklist, with summary results of selected ISO/IEC 29142 cartridge attribute characterization tests, presented according to a required format

Note 1 to entry: The format is prescribed according to each ISO/IEC 29142 standardized or specified cartridge characterization test and is in compliance with ISO/IEC 29142-2.

4 Essential elements of cartridge characterization customer information

4.1 Cartridge information summary

[Table 1](#) summarizes the information that is detailed below in the various label, notification, customer reports, and cartridge attribute test report clauses. The table summarizes cartridge information for customers according to this International Standard.

Table 1 — Cartridge information

Information Items	Addressed in Cartridge Label	Addressed in Cartridge Notification
Environmental Responsibility	A locator for an operational Cartridge Take-back program should be provided on the cartridge itself.	A cartridge supplier offering an operational cartridge take-back program should include “Cartridge Take-back Information” or equivalent wording, along with a link to program use information. A cartridge supplier not offering an operational cartridge take-back program shall not include such an indicator or link.
Performance Attributes	no	A customer report can contain performance attribute test results.
Physical Attributes	no	A customer report can contain physical attribute test results.
Supplier Type	The distinction of original or non-original supplier is indicated by the requirement to identify the cartridge supplier.	The distinction of original or non-original supplier is addressed through the requirement to include the cartridge supplier name, and by the requirement that only a single supplier identifier is discoverable or readable on the cartridge, accompanying packaging and in related ISO/IEC 29142 reports.
Cartridge Condition	<p>The terms ‘Remanufactured’ or ‘Refilled’ are neither required nor disallowed in this part of ISO/IEC 29142 and such marking should follow applicable regulations.</p> <p>In compliance with ISO/IEC 29142, the environmental impact of a cartridge shall be assessed by means of standards written in accordance with ISO/IEC 29142-3. Cartridge environmental impact assessment shall not be based on whether the cartridge is original, non-original, remanufactured, or refilled. These cartridge conditions do not indicate the environmental impact of the cartridge supplier’s manufacturing and/or remanufacturing processes.</p>	<p>The terms “Remanufactured” or “Refilled” are neither required nor disallowed in this part of ISO/IEC 29142 and such marking should follow applicable regulations.</p> <p>In compliance with ISO/IEC 29142, the environmental impact of a cartridge shall be assessed by means of standards written in accordance with ISO/IEC 29142-3. Cartridge suppliers and collectors should be aware that cartridge environmental assessment is not based on whether the cartridge is original, non-original, remanufactured, or refilled. These cartridge conditions do not indicate the environmental impact of the cartridge supplier’s manufacturing and/or remanufacturing processes.</p>

5 Cartridge labels

5.1 Cartridge label application

This part of ISO/IEC 29142 imposes NO requirements dealing with cartridge label format. In the context of this International Standard, a cartridge label is defined only as a particular set of information.

5.2 Cartridge label location

The cartridge label shall be displayed on the cartridge. The cartridge label shall also be displayed on retail cartridge packaging. The cartridge label should be displayed on bulk cartridge packaging.

5.3 Cartridge label information

5.3.1 Cartridge identification

The cartridge label shall contain a cartridge identifier.

5.3.2 Referencing ISO/IEC 29142

The cartridge label shall not include reference to “ISO/IEC 29142” in any context.

5.3.3 Colourant identification

A cartridge label shall include the alphanumeric formatted human readable colour names and/or representatively coloured images of the colourant(s) included in the cartridge.

5.3.4 Cartridge supplier identification

A cartridge label shall include a distinctive identifier for the cartridge supplier, which shall identify the party and/or parties responsible for marketing the cartridge and providing customer support for the cartridge. The cartridge supplier identifier may be the supplier name, trademark, logo, or other distinctive supplier mark.

When a cartridge is marketed or distributed, each cartridge supplier shall ensure that no label, name, logo, distinctive mark or trademark of another cartridge supplier is readable or discoverable on the cartridge, accompanying packaging, or related customer and cartridge attribute test reports.

5.3.5 Cartridge take-back and collection program identification

The cartridge label should contain information (for example, a company logo or URL) useful to guide customers to information about the operational Cartridge Take-back program offered by the cartridge supplier. Such information is recommended to address the problem that at disposal time users might not have access to the cartridge packaging.

5.3.6 Cartridge label information chart

Table 2 — Cartridge Label

Information Name	Information Detail
Cartridge Identification	Cartridge Identifier
Colourant Identification	e.g. “CMYK” and e.g. coloured icons
Cartridge Supplier Identification	Distinctive identifier for the cartridge supplier
Take-Back Program Indicator	In the case that the cartridge supplier offers an operational take-back program, the label should include sufficient means to guide a user to the applicable Cartridge Take-back program information. A cartridge supplier not offering an operational cartridge take-back program shall not include such an indicator or link in the label.

6 Cartridge notifications

6.1 Cartridge notification application

This part of ISO/IEC 29142 imposes NO requirements dealing with cartridge notification format. In the context of this part of ISO/IEC 29142 a cartridge notification is defined only as a particular set of information.

6.2 Cartridge notification location

The cartridge notification shall be displayed on retail cartridge packaging and should be displayed on bulk cartridge packaging. The cartridge notification may appear on the cartridge.

6.3 Cartridge notification information

6.3.1 Cartridge identification

The cartridge notification shall include the cartridge identifier.

6.3.2 Referencing ISO/IEC 29142

The cartridge notification shall not include reference to “ISO/IEC 29142” in any context.

In addition to the requirements of ISO/IEC 29142 stated in this part of ISO/IEC 29142, notification of cartridge characterization testing in compliance with ISO/IEC 29142 is exclusively reserved to cartridge characterization tests standardized or specified in parts of ISO/IEC 29142.

6.3.3 Access to ISO/IEC 29142 customer reports

A cartridge notification should include a URL that provides access to or a method to access at least one ISO/IEC 29142-2 compliant customer report.

6.3.4 Colourant identification

A cartridge notification shall include the alphanumeric formatted human readable colour names and/or representatively coloured images of the colourant(s) included in the cartridge.

6.3.5 Cartridge supplier identification

A cartridge notification shall include a distinctive identifier for the cartridge supplier, which shall identify the party and/or parties responsible for marketing the cartridge and providing customer support for the cartridge. The cartridge supplier identifier may be the supplier name, trademark, logo, or other distinctive supplier mark.

The information identifying the cartridge supplier shall include at least a URL or direct contact information. The URL shall point to a website containing the cartridge supplier contact information, such as company name, surface mail address, email address, telephone number and/or FAX number of these responsible parties. Alternatively, the cartridge supplier may provide contact information directly in the cartridge notification.

When a cartridge is marketed or distributed, each cartridge supplier shall ensure that no label, name, logo, distinctive mark or trademark of another cartridge supplier is readable or discoverable on the cartridge, accompanying packaging, or related customer reports and cartridge attribute test reports.

The font and font size shall be clearly legible and prominent.

6.3.6 Cartridge take-back or collection program identification

A cartridge supplier offering an operational cartridge take-back program should include the statement “Cartridge Take-back Information” or equivalent wording, as part of the ISO/IEC 29142 cartridge notification. With the Cartridge Take-back Information statement, a cartridge supplier shall include an associated URL pointing to a website describing the use and applicability of an operational cartridge take-back or collection program.

On an annual basis, the cartridge supplier shall provide on its website the cartridge end-of-life management methods for all cartridges collected through its take-back program over the preceding year. The cartridge supplier shall report the following:

Total tonnage of cartridges collected annually (in metric tons)

Total tonnage of collected materials not yet dispositioned (at the time of the report)

Total tonnage of materials sent to each of the following after cartridge end-of-life management methods as a proportion of total collected weight of cartridges:

- Reuse, components
- Recycling, materials
- Waste to energy
- Landfilled
- Incineration

NOTE From the IEEE 1680.2 Standard for Environmental Assessment of Imaging Equipment (EPEAT) clause pertaining to Required Criteria “provision for take-back and after cartridge end-of-life management for cartridges”, adopted as part of the EPEAT standard.

The website should include or provide a link to the environmental policy and environmental management system which governs the cartridge end-of-life management methods used by the cartridge collector according to ISO 14001 or an equivalent framework.

A cartridge supplier not offering an operational cartridge take-back program shall not include the Cartridge Take-back information statement or related link in the cartridge notification.

The font and font size shall be clearly legible and prominent.

6.3.7 Cartridge notification information chart

Table 3 — Cartridge Notification

Information Name	Information Detail
Cartridge Identification	Cartridge Identifier
Cartridge Characterization	A URL with access to or a method to access a customer report
Colourant Identification	e.g. “CMYK” and e.g. coloured icons
Cartridge Supplier Identification and Link	Supplier Company Name and a URL or direct contact information with access to cartridge supplier contact information
Take-back Program Indicator and Link	A cartridge supplier offering an operational cartridge take-back program should include “Cartridge Take-back Information” or equivalent wording. A cartridge supplier not offering an operational cartridge take-back program shall not include such an indicator or link.

The cartridge notification may include a single URL that provides a single point of access to the information required.

7 Reporting structure

[Figure 1](#) contains an example representing the relationships between cartridge notifications, customer reports, and cartridge attribute test reports.

Notice that the left two customer reports both deal with the same cartridge set. The two separate customer reports are required because in this case the same cartridge set can operate on two separate distinct print systems, such as first and second generations of a printer family.

Cartridge Set B, as shown in the example, includes one cartridge from Cartridge Set A, along with four other cartridges. For example, one might have the same black cartridge, with four new colour cartridges, used in different print modes available in a print system.

The example of the customer report for Cartridge Set C shows that a cartridge set may include only a single cartridge, for instance in the case of a black-only printer.

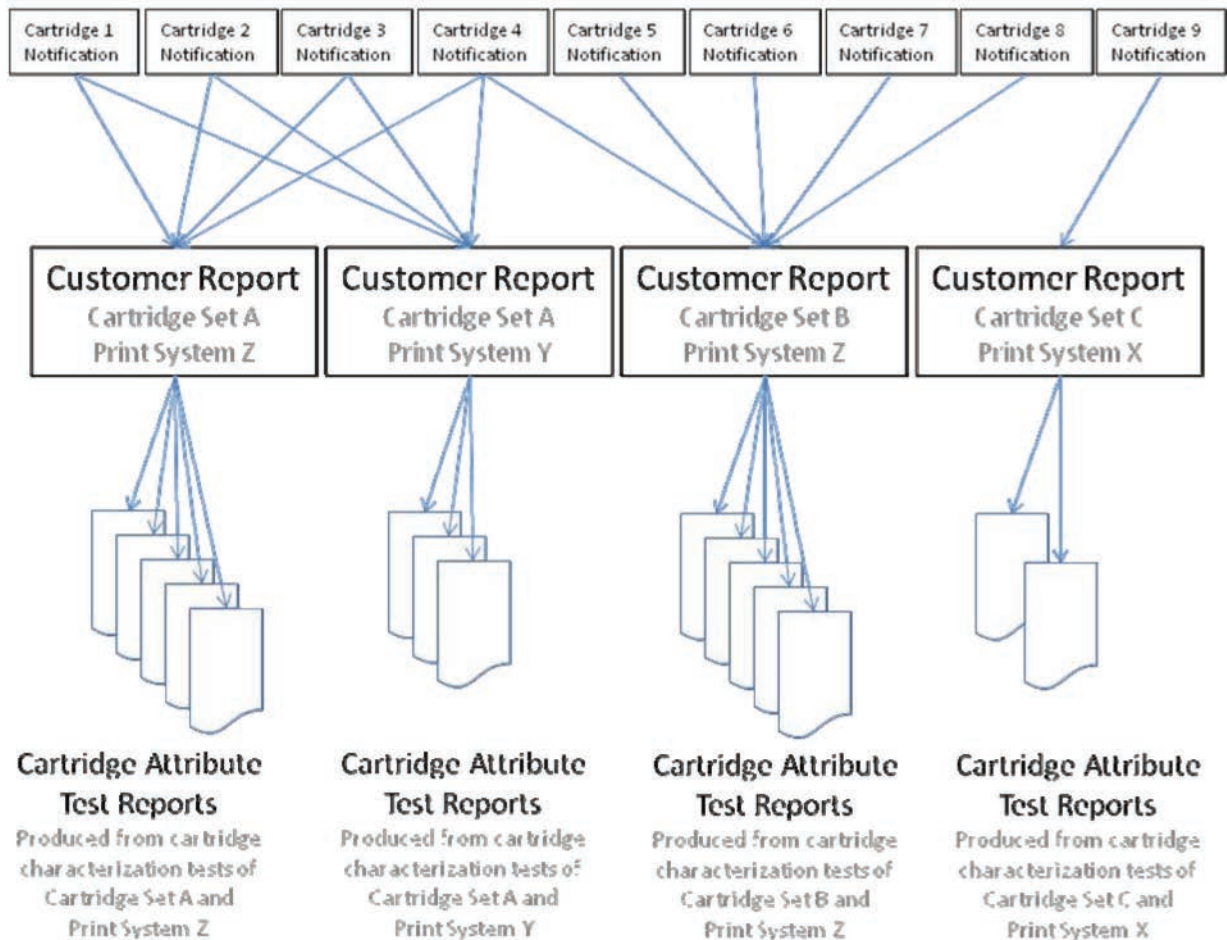


Figure 1 — Hierarchy of cartridge notifications, customer reports, and cartridge attribute test reports

Cartridge notifications are specific to each cartridge, regardless of the cartridge sets and print systems for which the cartridge is operational. Customer reports and cartridge attribute test reports are required to be specific to each unique cartridge set and distinct print system combination.

Each customer report shall include the summary cartridge characterization results for each of the performed cartridge characterization tests, for example the customer report for Cartridge Set A, Print System Z, in [Figure 1](#), contains the summary cartridge characterization results for Cartridge 1, 2, 3 and 4. Likewise that customer report contains links to a separate cartridge attribute test report for each performed cartridge characterization test. For example, the customer report for Cartridge Set A, Print System Z, in [Figure 1](#), links to five cartridge attribute test reports corresponding to five separate cartridge characterization tests.

The origins of the arrows in [Figure 1](#) indicate the documentation point that is required to contain the relevant URL to connect the documentation hierarchy.

8 Customer reports

8.1 Customer report application

A customer report shall pertain to a single cartridge set and the cartridge characterization results of that cartridge set operating in a single distinct print system. In the case that a particular cartridge set can be operational in more than one distinct print system, then separate customer reports and associated

cartridge attribute test reports shall be created to report the cartridge characterization results for each of those distinct print systems.

NOTE A distinction among print systems exists when there is an operational difference that might be expected to affect cartridge usage and performance. So, for example, if several printer models from a single original equipment manufacturer all print with the same colourant delivery mechanisms and operating points, those printer models are considered to be part of the same “distinct print system.” On the other hand, devices operating with different characteristics affecting cartridge usage and performance would be part of different print systems.

The cartridge characterization results of the standardized or specified test methods of ISO/IEC 29142 are optional to report, and a subset of such standardized tests can be selected and reported. If an attribute is selected and characterized using a test method standardized or specified in compliance with ISO/IEC 29142, then the attribute cartridge characterization results for the claimed cartridge set shall be reported according to the compliant standardized or specified test method, and according to ISO/IEC 29142-2 in order to claim compliance with this cartridge standard.

A customer report is restricted to reporting cartridge characterization test results for one or more distinct cartridges in a single distinct operationally valid cartridge set, tested using a single distinct print system.

8.2 Customer report location

The customer report(s) pertinent to the cartridge set(s) that can include the cartridge, and the print systems in which the cartridge is operational, shall be accessible or available from the URL or access method included in each cartridge notification.

A customer report may be displayed on or provided with cartridge packaging.

A customer report may be displayed with other cartridge information, such as in a cartridge product data sheet or on a cartridge product information website. In each and every instance the customer report of a particular cartridge set according to ISO/IEC 29142 shall contain the same information.

8.3 Customer report information

8.3.1 Cartridge identification

The customer report shall include the cartridge identifier(s) for each distinct cartridge of the tested cartridge set.

NOTE 1 A cartridge supplier may choose to use more than one identifier for a single distinct cartridge. Cartridges with different cartridge identifiers are considered to be the same distinct cartridge when and if they are physically and operationally equivalent with respect to cartridge characterization attributes.

NOTE 2 A cartridge supplier may choose to use more than one identifier for a single distinct cartridge. As a result, a single distinct operationally valid cartridge set comprises an operationally valid set of distinct cartridges, rather than an operationally valid set of uniquely identified cartridges.

8.3.2 Colourant identification

A customer report shall include the alphanumeric formatted human readable colour names and/or representatively coloured images of the colourant(s) included in each cartridge of the tested cartridge set.

8.3.3 Cartridge supplier identification

A customer report shall include a distinctive identifier for the cartridge supplier, which shall identify the party and/or parties responsible for marketing the cartridge and providing customer support for the cartridge. The cartridge supplier identifier may be the supplier name, trademark, logo, or other distinctive supplier mark.

The information identifying the cartridge supplier shall include at least a URL or direct contact information. The URL shall point to a website containing the cartridge supplier contact information, such as company name, surface mail address, email address, telephone number and/or FAX number of these responsible parties. The cartridge supplier may provide also contact information directly in the customer report.

8.3.4 Claimed print system

A customer report shall include complete, manufacturer accredited, identification(s) of the distinct print system product used in the cartridge characterization test(s) of the cartridge set, and the other printer products, if any, within the same distinct print system for which the customer report is applicable.

NOTE A manufacturer accredited identification of a print system identifies the print system using the original equipment manufacturer print system identifiers.

8.3.5 Identification of ISO/IEC 29142 compliance

A customer report shall include the statement "Customer Report, compliant with ISO/IEC 29142".

8.3.6 Cartridge attribute checklist

A customer report shall include the ISO/IEC 29142-2, [Annex A](#) cartridge attribute checklist presenting the list of available ISO/IEC 29142 standardized or specified cartridge characterization tests applicable to the print technology of the cartridge, either ink or black-only toner or colour toner, with a yes or no or checkmark indicating whether cartridge characterization test results for the cartridge set and print system of the customer report are available for each of the listed tests.

Additional compliant cartridge characterization tests, standardized or specified in parts of ISO/IEC 29142 shall be included in the cartridge attribute checklist of any subsequent customer report, following approval of an ISO Technical Corrigendum to revise ISO/IEC 29142-2, [Annex A](#) to include such cartridge characterization tests.

8.3.7 Summary cartridge characterization results

A customer report shall include summary cartridge characterization results for each cartridge of the tested cartridge set, for each of the cartridge characterization tests listed as available and tested in the customer report cartridge attribute checklist. The summary cartridge characterization results in the customer report shall be reported according to ISO/IEC 29142-2 and the ISO/IEC 29142 standardized or specified test method.

8.3.8 Associated cartridge attribute test reports

An associated cartridge attribute test report shall be provided for each cartridge characterization result listed as available in the customer report cartridge attribute checklist, for each cartridge of the tested cartridge set. Each customer report shall include, for each available cartridge characterization result, a URL or contact information, through which the associated cartridge attribute test report(s), containing the corresponding details for the cartridge characterization result(s) of the customer report, shall be available. The cartridge characterization results in the cartridge attribute test report shall be reported according to the ISO/IEC 29142-2 and the standardized or specified test method.

8.3.9 Customer report information chart

Table 4 — Customer Report

Information Name	Information Detail
Cartridge Identification	Cartridge Identifier
Colourant Identification	e.g. “CMYK” and, e.g. coloured icons
Cartridge Supplier Identification and Link	Supplier Company Name and a URL or direct contact information with access to cartridge supplier contact information
Claimed Print System	Complete, manufacturer accredited, identification(s) of the distinct print system product used in the cartridge characterization test(s) of the cartridge set, and the other printer products, if any, within the same distinct print system for which the customer report is applicable
Compliance	“Customer Report, compliant with ISO/IEC 29142”
Cartridge Attribute Checklist	Cartridge Attribute Checklist according to Annex A
Summary Cartridge Characterization Results	Summary Cartridge Characterization Results, for each cartridge of the set, for each test checked as available in the Cartridge Attribute Checklist.
Cartridge Attribute Test Report Availability	Any reliable method of accessing the Cartridge Attribute Test Reports, such as a URL or other contact information, for each test checked as available in the Cartridge Attribute Checklist

9 Cartridge attribute test reports

9.1 Cartridge attribute test report application

A cartridge attribute test report shall pertain to the technical cartridge characterization results of a single cartridge characterization test that is compliant with ISO/IEC 29142-1 and the ISO/IEC 29142 standardized or specified test method, and is conducted to test a single operationally valid cartridge set operating in a single distinct print system.

In the case that a distinct cartridge set can be operational in more than one distinct print system, then separate cartridge customer reports and associated cartridge attribute test reports shall be created to report the cartridge characterization results for each distinct print system.

A cartridge attribute test report is restricted to reporting a cartridge characterization test result for one or more distinct cartridges in a single distinct operationally valid cartridge set, tested using single distinct print system.

9.2 Cartridge attribute test report location

The cartridge attribute test report(s) claimed as available in the referencing customer report cartridge attribute checklist and pertinent to the cartridge set(s) that can include the cartridge, and the print systems in which the cartridge is operational, shall be accessible or available from the cartridge attribute test report URL or access method included in the customer report.

A cartridge attribute test report may be displayed with other cartridge information, such as in a cartridge product data sheet on a cartridge product information website. In each and every instance the particular ISO/IEC 29142 compliant cartridge attribute test report of a particular cartridge set and distinct print system combination, tested according to ISO/IEC 29142, shall contain the same information.

9.3 Cartridge attribute test report information

9.3.1 Cartridge identification

The cartridge attribute test report shall include the cartridge identifier(s) for each distinct cartridge of the tested cartridge set

NOTE 1 A cartridge supplier may choose to use more than one identifier for a single distinct cartridge. Cartridges with different cartridge identifiers are considered to be the same distinct cartridge when and if they are physically and operationally equivalent with respect to cartridge characterization attributes.

NOTE 2 A cartridge supplier may choose to use more than one identifier for a single distinct cartridge. As a result, a single distinct operationally valid cartridge set comprises an operationally valid set of distinct cartridges, rather than an operationally valid set of uniquely identified cartridges.

9.3.2 Colourant identification

A cartridge attribute test report shall include the alphanumeric formatted human readable colour names and/or representatively coloured images of the colourant(s) included in each cartridge of the tested cartridge set.

9.3.3 Cartridge supplier identification

A cartridge attribute test report shall include a distinctive identifier for the cartridge supplier, which shall identify the party and/or parties responsible for marketing the cartridge and providing customer support for the cartridge. The cartridge supplier identifier may be the supplier name, trademark, logo, or other distinctive supplier mark.

The information identifying the cartridge supplier shall include at least a URL or direct contact information. The URL shall point to a website containing the cartridge supplier contact information, such as company name, surface mail address, email address, telephone number and/or FAX number of these responsible parties. The cartridge supplier may provide also contact information directly in the cartridge attribute test report.

9.3.4 Claimed print system

A cartridge attribute test report shall include complete, manufacturer accredited, identification(s) of the distinct print system product used in the cartridge characterization test of the cartridge set, and the other printer products, if any, within the same distinct print system for which the cartridge attribute test report is applicable.

NOTE A manufacturer accredited identification of a print system identifies the print system using the original equipment manufacturer print system identifiers.

9.3.5 Identification of ISO/IEC 29142 compliance

A cartridge attribute test report shall include the statement "Cartridge Attribute Test Report, compliant with ISO/IEC 29142".

9.3.6 Standardized cartridge characterization test identification

A cartridge attribute test report shall include identification, by reference to the standard number and name, of the ISO/IEC 29142 standardized or specified cartridge characterization test. The cartridge attribute test report shall identify each selection made for optional and/or configurable test method parameters.

9.3.7 Customer report reference

A cartridge attribute test report shall include a URL providing access to or a method of access for the customer report that references the cartridge attribute test report.

9.3.8 Detailed technical results of the cartridge characterization test

The detailed technical results of the particular cartridge characterization test for each cartridge of the claimed cartridge set shall be reported in accordance with the ISO/IEC 29142 standardized or specified cartridge characterization test, and shall be reported in accordance with ISO/IEC 29142-2.

9.3.9 Cartridge attribute test report information chart

Table 5 — Cartridge Attribute Test Report

Information Name	Information Detail
Cartridge Identification	Cartridge Identifier
Colourant Identification	e.g. "CMYK" and, e.g. coloured icons
Cartridge Supplier Identification and Link	Supplier Company Name and a URL or direct contact information with access to cartridge supplier contact information
Claimed Print System	Complete, manufacturer accredited, identification(s) of the distinct print system product used in the cartridge characterization test of the cartridge set, and the other printer products, if any, within the same distinct print system for which the cartridge attribute test report is applicable
Compliance	"Cartridge Attribute Test Report, compliant with ISO/IEC 29142"
Test Identification	Test identification by reference to the standard number and name, of the ISO/IEC 29142 standardized or specified cartridge characterization test
Customer Report Availability	A URL with access to or a method of accessing the customer report that references this cartridge attribute test report
Detailed Technical Results of the Cartridge Characterization Test	Detailed technical results of the cartridge characterization test for each cartridge of the set

Annex A (normative)

Cartridge attribute checklist for ISO/IEC 29142 compliant cartridge characterization tests

A.1 Selectable checklists

Addition of ISO/IEC 29142 compliant cartridge characterization tests, standardized or specified in parts of ISO/IEC 29142, shall be included in this [Annex A](#) cartridge attribute checklist through approval of an ISO/IEC Technical Corrigendum to add such tests to this ISO/IEC 29142-2, [Annex A](#). This Annex shall be revised at least every five years to include available ISO/IEC 29142 compliant cartridge characterization tests.

Table A.1 — Comprehensive Cartridge Attribute Checklist

Attribute Name	ISO/IEC 29142 Part #	Part Annex ID	Applicable
Cartridge page yield, black-only printer (ISO/IEC 19752)	2	B	Toner
Cartridge page yield, colour printer (ISO/IEC 19798)	2	B	Toner
Cartridge photo yield (ISO/IEC 29102)	2	B	Ink
Cartridge page yield (ISO/IEC 24711)	2	B	Ink

Table A.2 — Cartridge Attribute Checklist for Ink Cartridge Reporting

Attribute Name	ISO/IEC 29142 Part #	Tested ?
Cartridge photo yield (ISO/IEC 29102)	2	
Cartridge page yield (ISO/IEC 24711)	2	
Cartridge page yield, black-only printing with colour printer (ISO/IEC 24711:2007, Annex E)	2	
NOTE Black only yield is reported together with colour yield according to ISO/IEC 24711.		

Table A.3 — Cartridge Attribute Checklist for Colour Toner Cartridge Reporting

Attribute Name	ISO/IEC 29142 Part #	Tested ?
Cartridge page yield (ISO/IEC 19798)	2	
Cartridge page yield, black-only printing with colour printer (ISO/IEC 19798:2007, Annex D)	2	
NOTE Black only yield is reported together with colour yield according to ISO/IEC 19798.		

Table A.4 — Cartridge Attribute Checklist for Black-only Printer Toner Cartridge Reporting

Attribute Name	ISO/IEC 29142 Part #	Tested ?
Cartridge page yield, black only (ISO/IEC 19752)	2	

Annex B

(normative)

Yield Standards Customer Reports and Cartridge Attribute Test Reports

B.1 ISO/IEC 19752

B.1.1 Customer Report Summary Cartridge Characterization Results

In compliance with ISO/IEC 29142-2, the Declaration of the yield for each cartridge of the tested cartridge set, as defined in ISO/IEC 19752, shall be included in the Customer Report for a tested cartridge set. The Declaration of the yield as defined in ISO/IEC 19752 is the summary cartridge characterization result of the ISO/IEC 19752 yield test for each cartridge of the tested cartridge set.

B.1.2 Cartridge Attribute Test Report Detailed Technical Results

In compliance with ISO/IEC 29142-2, the information of the Test data reporting requirements, as defined in ISO/IEC 19752, shall be collected for each cartridge of a tested cartridge set and included in the Cartridge Attribute Test Report pertaining to the ISO/IEC 19752 yield of the tested cartridge set. The Test data report as defined in ISO/IEC 19752 is the detailed technical result of the cartridge characterization ISO/IEC 19752 yield test for each cartridge of a tested cartridge set.

B.2 ISO/IEC 19798

B.2.1 Customer Report Summary Cartridge Characterization Results

In compliance with ISO/IEC 29142-2, the Declaration of the yield for each cartridge of the tested cartridge set, as defined in ISO/IEC 19798, shall be included in the Customer Report for a tested cartridge set. The Declaration of the yield as defined in ISO/IEC 19798 is the summary cartridge characterization result of the ISO/IEC 19798 yield test for each cartridge of the tested cartridge set.

B.2.2 Cartridge Attribute Test Report Detailed Technical Results

In compliance with ISO/IEC 29142-2, the information of the Test data reporting requirements, as defined in ISO/IEC 19798, shall be collected for each cartridge of a tested cartridge set and included in the Cartridge Attribute Test Report pertaining to the ISO/IEC 19798 yield of the tested cartridge set. The Test data report as defined in ISO/IEC 19798 is the detailed technical result of the cartridge characterization ISO/IEC 19798 yield test for each cartridge of a tested cartridge set.

B.3 ISO/IEC 24711

B.3.1 Customer Report Summary Cartridge Characterization Results

In compliance with ISO/IEC 29142-2, the Declaration of the yield for each cartridge of the tested cartridge set, as defined in ISO/IEC 24711, shall be included in the Customer Report for a tested cartridge set. The Declaration of the yield as defined in ISO/IEC 24711 is the summary cartridge characterization result of the ISO/IEC 24711 yield test for each cartridge of the tested cartridge set.

B.3.2 Cartridge Attribute Test Report Detailed Technical Results

In compliance with ISO/IEC 29142-2, the information of the Test data reporting requirements, as defined in ISO/IEC 24711, shall be collected for each cartridge of a tested cartridge set and included in the Cartridge Attribute Test Report pertaining to the ISO/IEC 24711 yield of the tested cartridge set. The Test data report as defined in ISO/IEC 24711 is the detailed technical result of the cartridge characterization ISO/IEC 24711 yield test for each cartridge of a tested cartridge set.

B.4 ISO/IEC 29102

B.4.1 Customer Report Summary Cartridge Characterization Results

In compliance with ISO/IEC 29142-2, the Declaration of the yield for each cartridge of the tested cartridge set, as defined in ISO/IEC 29102, shall be included in the Customer Report for a tested cartridge set. The Declaration of the yield as defined in ISO/IEC 29102 is the summary cartridge characterization result of the ISO/IEC 29102 yield test for each cartridge of the tested cartridge set.

B.4.2 Cartridge Attribute Test Report Detailed Technical Results

In compliance with ISO/IEC 29142-2, the information of the Test data reporting requirements, as defined in ISO/IEC 29102, shall be collected for each cartridge of a tested cartridge set and included in the Cartridge Attribute Test Report pertaining to the ISO/IEC 29102 yield of the tested cartridge set. The Test data report as defined in ISO/IEC 29102 is the detailed technical result of the cartridge characterization ISO/IEC 29102 yield test for each cartridge of a tested cartridge set.

