
**Imaging materials — Permanence —
Vocabulary**

Matériaux pour image — Permanence — Vocabulaire

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 18913:2012

<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>



iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 18913:2012

<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing 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
Bibliography.....	22

iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO 18913:2012](https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012)

<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>

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.

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

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member 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 shall not be held responsible for identifying any or all such patent rights.

ISO 18913 was prepared by Technical Committee ISO/TC 42, *Photography*.

This second edition cancels and replaces the first edition (ISO 18913:2003), which has been technically revised.

ITIH STANDARD PREVIEW
(standards.iteh.ai)

ISO 18913:2012

<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>

Introduction

This International Standard is one of a series dealing with the physical properties and stability of imaging materials.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO 18913:2012](https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012)

<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 18913:2012

<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>

Imaging materials — Permanence — Vocabulary

1 Scope

This International Standard establishes a vocabulary of terms and definitions used in relation to the permanence of imaging materials, related storage materials and digital storage media.

In most cases these terms and definitions are generic and are applicable to the entire imaging industry. For terms and definitions specific to particular applications, industry standards are applicable. However, in some cases the definition of a term is still evolving and/or is used by different user groups in different ways. In these cases, a definition related to permanence of imaging materials work is given and a note to this effect is included.

2 Normative references

The following referenced documents are indispensable for the application 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 18913:2012

ISO 10716, *Paper board — Determination of alkali reserve*
5d42a3e-ad98-4b19-8a5F-91267d56ff40/iso-18913-2012

ISO 14644-1, *Cleanrooms and associated controlled environments — Part 1: Classification of air cleanliness by particle concentration*

ISO 18902, *Imaging materials — Processed imaging materials — Albums, framing and storage materials*

ISO 18906, *Imaging materials — Photographic films — Specifications for safety film*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

abrasion

wearing away of a surface by friction as a result of rubbing

3.2

absolute humidity

mass of water vapour per unit volume of air

3.3

accelerated ageing

changes in the characteristics of an image-bearing material that occur when one or more of the environmental factors (such as temperature, light, or air pollutants) is intentionally increased above that found in typical use or storage conditions, usually to induce change in a shorter period of time

NOTE This is done in order to predict the behaviour of a product under typical storage or display conditions.

3.4

accuracy

closeness of the agreement between the result of a measurement and a true value of the measurement

NOTE 1 Accuracy is a qualitative concept.

NOTE 2 The term **precision** should not be used for **accuracy**.

3.5

acid-free adhesive

mounting adhesive with a cold extraction pH between $7,0 \pm 0,2$ and $9,5 \pm 0,2$, as stipulated in ISO 18902

3.6

acid-free paper or paperboard

paper or paperboard with a cold extraction pH between $7,0 \pm 0,2$ and $9,5 \pm 0,2$ that is produced in an acid-free process and sized in a neutral or alkaline manner, as stipulated in ISO 18902

3.7

album

binder or book structure having front and back covers (usually opaque and rigid) in which pages are bound along one edge either by plastic straps, gluing, sewing, metal posts or rings

3.8

albumen plate

glass sheet bearing a silver halide/albumen layer which yields a visible image after exposure and processing

3.9

ambient conditions

working environment

iTeh STANDARD PREVIEW
(standards.iteh.ai)

NOTE For preservation purposes these may or may not be the same as the storage environment.

[ISO 18913:2012](https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012)

3.10

ambrotype plate

glass plate collodion positive, i.e. glass sheet bearing a thin silver halide/cellulose nitrate layer which yields a visible image after exposure and processing

<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>

NOTE The processed negative silver image appears as a positive when backed by a dark field.

3.11

anti-blocking agent

component of a material that provides microscopic bumps on the surface in order to lower contact area, reduce the coefficient of friction and minimize ferrotyping, blocking and the occurrence of Newton's rings

EXAMPLE Talc, silicates or matte beads.

3.12

aperture card

card of standard dimensions with one or more openings into which a microfilm frame or frames can be mounted or inserted

3.13

aperture window

opening in the flange that is used to facilitate threading of magnetic tape on the hub and inspection of the wind

3.14

archival (deprecated)

material that can be expected to preserve images forever, so that such images can be retrieved without significant loss when properly stored

NOTE As no such material exists, this is a deprecated term and as such is not to be used in International Standards for imaging materials or in systems specifications.

3.15**Arrhenius plot**

plot of the logarithm of the time for a given change in a characteristic proportional to the reaction rate (dye loss, tensile strength change, D_{\min} yellowing, etc.) versus the reciprocal of the temperature expressed in Kelvin

NOTE The Arrhenius plot can be used to predict behaviour at a temperature lower than that at which a test is run, as described in ISO 18924^[1].

3.16**base**

support in a recording material on which the image receiving/recording layers or magnetic layer (and, if necessary, the back layer) are coated

3.17**baseline**

condition representing a hard copy system (print, optical disc, etc.) at time of manufacture

NOTE This is customarily the initial parameter measurement taken prior to any application of stress. The designation is usually $t = 0$ for a stress time equal to zero hours.

3.18**blister**

localized delamination of a multilayer assembly that looks like a bubble

3.19**Block Error Rate
BLER**

ratio of erroneous blocks to total blocks on an optical disc measured at the input of the first (C1) decoder (before any error correction is applied)

NOTE The more commonly reported value for BLER is the number of erroneous blocks per second measured at the input of the C1-decoder during playback at the standard (1X) data rate.

3.20**blocking**

sticking together of similar or dissimilar materials in physical contact

cf. **anti-blocking agent** (3.11)

3.21**blue print**

defect resulting from a drastic reduction in the light stability of the yellow dye in a chromogenic print

NOTE A common cause is when a print has been lacquered in a very humid environment or was not thoroughly dried before lacquering.

3.22**brittleness**

property of a material that causes it to crack or break when bent or flexed

3.23**buffered**

paper or paperboard with alkali reserve (as defined in ISO 10716) that is equivalent to at least 2,0 % mass fraction calcium carbonate (CaCO_3)

3.24**can**

metal or plastic container for a roll of recording material, such as photographic film or magnetic tape

3.25

carrier

medium upon which information is recorded

cf. **medium** (3.114)

3.26

carton or box

outer container that can hold one or more individual units and which may be a fabrication of paper, card stock or plastic

3.27

cartridge

housing for a roll of recording material, such as photographic film or magnetic tape, wound on a single hub or reel

cf. **cassette** (3.28)

NOTE The term **cartridge** is also used in some cases to describe an ink container.

3.28

cassette

housing for a roll of recording material, such as photographic film or magnetic tape, whose ends are attached to two hubs or reels

cf. **cartridge** (3.27)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

3.29

CD-ROM

compact disc read only medium

optical disc to which information is transferred during manufacture to certain areas in the compact disc format

ISO 18913-2012
<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>

NOTE The information can be read many times.

3.30

CD-RW

compact disc rewritable

recordable optical disc in which information can be recorded to certain areas in the compact disc format

NOTE The information can be erased and rerecorded many times.

3.31

cellulose-acetate base

base for recording materials composed mainly of cellulose esters of acetic acid

3.32

cellulose-ester base

base for recording materials composed mainly of cellulose esters of acetic, propionic or butyric acid, or mixtures thereof

3.33

class 100 000 clean room

controlled environment in which the level of airborne contaminants meets the requirements of ISO 14644-1

3.34

collodion plate

collodion wet plate

collodion dry plate

glass sheet bearing a thin silver halide/cellulose nitrate layer which yields a visible image after exposure and processing

3.35**colour screen plate**

glass sheet bearing a colour screen consisting of dyed elements in contact with a silver halide/gelatine layer which yields a visible image after exposure and processing

3.36**compact disc****CD**

CD-ROM optical disc format on which the information layer is located at one surface of a substrate and the data can be read by an optical beam

NOTE Described in IEC 60908.

3.37**compact disc-recordable****CD-R**

recordable optical disc in which information can be recorded to certain areas in compact disc format

NOTE 1 Information can be recorded one time and read many times.

NOTE 2 The term "compact disc-write once" (CD-WO) has also been used to describe this type of disc.

3.38**conditioning**

exposure of a specimen to air at a given relative humidity and temperature until equilibrium is reached

3.39**conservation**

examination and analysis, documentation and treatment of library or archive materials, artwork or objects to stabilize them chemically or strengthen them physically, prolonging their life in the original form

<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>

3.40**container**

box, can or carton used for storage and shipping of recording materials

EXAMPLE The box into which a reel, cassette, cartridge, disc or shell is placed.

NOTE Reels, cassettes, cartridges or shells are not containers.

3.41**copy**

reproduction of the information from a master

3.42**core**

metal or plastic cylinder on which recording material is wound

cf. **hub** (3.84)

3.43**crazing**

network of fine cracks on the surface of a print or film usually the result of environmental stresses on the surface layer

3.44**cupping**

departure of film or paper from physical flatness characterized by the condition where the four corners of a rectangular sheet turn up but the edges do not

3.45

curl

departure of film, paper or magnetic tape from physical flatness with the tendency to curve into a cylindrical shape

3.46

cyan spots

defect that results when the ultraviolet absorber in an older technology chromogenic print crystallizes and permits the back-scattering of light

3.47

dark stability

ability of a print, negative or transparency to resist fading or staining to ambient environmental factors in the absence of light

3.48

daylight filter

optical filter or combination of filters that modifies the spectral power distribution of a light source to better represent some defined daylight spectrum

3.49

delamination

separation of a laminate into its constituent layers

3.50

dew point

temperature at which moisture begins to condense on a surface, corresponding to saturation for a given absolute humidity

iTeh STANDARD PREVIEW
(standards.iteh.ai)

cf. **relative humidity** (3.163)

ISO 18913:2012

EXAMPLE The more humid the air, the higher the dew-point temperature.
<https://standards.iteh.ai/catalog/standards/sist/95d42a3e-ad98-4b19-8a5f-91267d56ff40/iso-18913-2012>

3.51

differential dimensional change

difference between the dimensional changes of the material in the two principal directions (length and width)

NOTE Polyester-based films frequently have maximum and minimum dimensional changes in directions other than the length or width. These can be determined by rotating and viewing the uncoated base between a pair of crossed polarizers. When the direction corresponding to either the maximum or minimum dimensional change is coincident with the optical axis of one polarizer, there is minimum light transmission through the base.

3.52

digital print

print where the image is printed from the digital domain

NOTE There is substantial confusion around the definition of this term by users, particularly in the consumer market where it may be taken to mean a print where the original image is produced or manipulated in the digital domain.

3.53

digital printing media

media used by colour hard copy printers

EXAMPLE Silver halide, thermal dye transfer (“dye sub”), inkjet, electrophotography, paper, plastic, canvas, fabric or ink receptive materials.