

---

---

**Identification cards — Physical  
characteristics**

*Cartes d'identification — Caractéristiques physiques*

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS

© ISO/IEC 2003

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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Conformance.....	1
3 Normative references.....	1
4 Terms and definitions.....	1
5 Dimensions of card.....	2
5.1 Card size.....	2
6 Card construction.....	4
7 Card materials.....	4
8 Card characteristics.....	4
8.1 Bending stiffness.....	4
8.2 Flammability.....	4
8.3 Toxicity.....	4
8.4 Resistance to chemicals.....	4
8.5 Card dimensional stability and warpage with temperature and humidity.....	4
8.6 Light.....	5
8.7 Durability.....	5
8.8 Peel strength.....	5
8.9 Adhesion or blocking.....	5
8.10 Opacity, ID-1 size card.....	5
8.11 Overall card warpage.....	6
8.12 Resistance to heat.....	6
8.13 Surface distortions.....	6
8.14 Contamination and interaction of card components.....	6
Annex A (normative) Resistance to heat test method.....	7
Annex B (informative) ID-000 size card as part of ID-1 size card.....	10

## 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 7810 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

This third edition cancels and replaces the second edition (ISO/IEC 7810:1995), which has been technically revised.

## Introduction

This edition is a 5 year technical revision of the previous edition and was prepared by JTC 1/SC 17/WG 1 *Physical characteristics and test methods for ID-cards*. It cancels and replaces ISO/IEC 7810:1995. The user is encouraged to review the entire standard for revisions and updates. The major changes made during this revision are listed below.

1. The addition of criteria and test method for heat resistance. This criteria should be met by existing PVC or PVCA materials, however, it allows the user to designate materials that can withstand higher temperatures.
2. Any special requirements for various recording technologies have been moved to the base standard for that particular recording technology.
3. The peel strength and opacity requirements were changed to conform with revised test methods in ISO/IEC 10373-1:1998.
4. Tolerances for ID-2 and ID-3 size cards have been added.
5. Size and tolerances for an ID-000 size card have been added along with an informative annex showing the relationship to an ID-1 size card.
6. The specified areas for opacity, previously shown in the test methods ISO/IEC 10373-1, have changed and are shown in this International Standard.

Notes in this International Standard are only used for giving additional information intended to assist in the understanding or use of the standard and do not contain provisions or requirements to which it is necessary to conform in order to be able to claim compliance with this International Standard.

This International Standard defines the minimum physical requirements for the basic plastic identification card and is used by the following identification card standards for recording technologies. Other standards not listed here may also refer to ISO/IEC 7810.

ISO/IEC 7501 series, *Identification cards — Machine readable travel documents*  
 ISO/IEC 7811 series, *Identification cards — Recording technique*  
 ISO/IEC 7812 series, *Identification cards — Identification of issuers*  
 ISO/IEC 7813, *Identification cards — Financial transaction cards*  
 ISO/IEC 7816 series, *Identification cards — Integrated circuit(s) cards with contacts*  
 ISO/IEC 10536 series, *Identification cards — Contactless integrated circuit(s) cards — Close-coupled cards*  
 ISO/IEC 14443 series, *Identification cards — Contactless integrated circuit(s) cards — Proximity cards*  
 ISO/IEC 15693 series, *Identification cards — Contactless integrated circuit(s) cards — Vicinity cards*  
 ISO/IEC 11693, *Identification cards — Optical memory cards — General characteristics*  
 ISO/IEC 11694 series, *Identification cards — Optical memory cards — Linear recording method*

This document is a preview generated by EVS

# Identification cards — Physical characteristics

## 1 Scope

This International Standard is one of a series of standards describing the characteristics for identification cards as defined in the definitions clause and the use of such cards for international interchange.

This International Standard specifies the physical characteristics of identification cards including card materials, construction, characteristics, and dimensions for four sizes of cards.

ISO/IEC 10373-1 specifies the test procedures used to check cards against the parameters specified in this International Standard.

This International Standard specifies the requirements for cards used for identification. It takes into consideration both human and machine aspects and states minimum requirements.

It is the purpose of this series of standards to provide criteria to which cards shall perform. No consideration is given within these standards to the amount of use, if any, experienced by the card prior to test. Failure to conform to specified criteria should be negotiated between the involved parties.

NOTE 1 Numeric values in the SI and/or Imperial measurement system in this International Standard may have been rounded off and therefore are consistent with, but not exactly equal to, each other. Either system may be used, but the two should not be intermixed or reconverted. The original design was made using the Imperial measurement system.

NOTE 2 A different standard for thin flexible cards exists. Thin flexible cards are not within the scope of this International Standard.

## 2 Conformance

An identification card is in conformance with this International Standard if it meets all mandatory requirements specified herein. Unless otherwise specified default values apply.

## 3 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/IEC 10373-1:1998, *Identification cards — Test methods — Part 1: General characteristics tests*

NOTE The ID-000 size card size was first defined by ENV 1375-1, Identification card systems — Intersector integrated circuit(s) card additional formats — Part 1: ID-000 card size and physical characteristics.

## 4 Terms and definitions

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