Third edition 2003-11-01

Reaffirmed as INCITS/ISO/IEC 7810:2003[R2013]

## Identification cards — Physical characteristics

Cartes d'identification — Caractéristiques physiques

## Adopted by INCITS (InterNational Committee for Information Technology Standards) as an American National Standard.

Date of ANSI Approval: 5/6/2004

Published by American National Standards Institute, 25 West 43rd Street, New York, New York 10036

Copyright 2004 by Information Technology Industry Council (ITI). All rights reserved.

These materials are subject to copyright claims of International Standardization Organization (ISO), International Electrotechnical Commission (IEC), American National Standards Institute (ANSI), and Information Technology Industry Council (ITI). Not for resale. No part of this publication may be reproduced in any form, including an electronic retrieval system, without the prior written permission of ITI. All requests pertaining to this standard should be submitted to ITI, 1250 Eye Street NW, Washington, DC 20005.

Printed in the United States of America



Reference number ISO/IEC 7810:2003(E)

## ISO/IEC 7810:2003(E)

This is a preview of "INCITS/ISO/IEC 7810:...". Click here to purchase the full version from the ANSI store.

## **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.

#### © 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
Web www.iso.org

Published in Switzerland

Third edition 2003-11-01

# Identification cards — Physical characteristics

Cartes d'identification — Caractéristiques physiques



## ISO/IEC 7810:2003(E)

This is a preview of "INCITS/ISO/IEC 7810:...". Click here to purchase the full version from the ANSI store.

## 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.

#### © 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
Web www.iso.org

Published in Switzerland

#### **Contents** Page Foreword ......iv Introduction ......v 1 Scope......1 2 Conformance ....... 1 3 5 5.1 Card size \_\_\_\_\_\_2 6 Card construction ......4 7 Card materials ......4 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 Peel strength \_\_\_\_\_\_5 8.8 8.9 Adhesion or blocking ......5 8.10 Opacity, ID-1 size card .......5 Overall card warpage 6 8 11 Resistance to heat ......6 8.12 8.13 Surface distortions ......6 8.14 Contamination and interaction of card components ......6

## **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