
**Identification cards — Thin flexible
cards —**

**Part 2:
Magnetic recording technique**

*Cartes d'identification — Cartes flexibles fines —
Partie 2: Techniques d'enregistrement magnétique*

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.

**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2007

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 |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions..... | 2 |
| 4 General characteristics | 4 |
| 4.1 Introduction | 4 |
| 4.2 Requirements common to all formats | 4 |
| 4.3 Environmental conditions..... | 5 |
| 5 Magnetic stripe characteristics | 5 |
| 5.1 Stripe surface | 5 |
| 5.2 Stripe adherence..... | 6 |
| 5.3 Stripe life..... | 6 |
| 5.4 Magnetic characteristics..... | 7 |
| 5.5 Magnetic stripe zone reservation..... | 7 |
| 6 TFC.0 data recording | 7 |
| 6.1 Magnetic track characteristics | 7 |
| 6.2 Encoding characteristics | 8 |
| 7 TFC.1 data recording | 9 |
| 7.1 Magnetic track characteristics | 9 |
| 7.2 TFC.1-specific stripe requirements..... | 10 |
| 7.3 Encoding characteristics | 11 |
| 8 TFC.5 data recording | 12 |
| 8.1 Magnetic track characteristics | 12 |
| 8.2 TFC.5-specific stripe requirements..... | 12 |
| 8.3 Encoding characteristics | 12 |
| Annex A (normative) Magnetics classes | 14 |
| Annex B (normative) Encoding classes..... | 16 |
| Bibliography | 19 |

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 15457-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

This second edition cancels and replaces the first edition (ISO/IEC 15457-2:2001), Annex A of which has been technically revised.

ISO/IEC 15457 consists of the following parts, under the general title *Identification cards — Thin flexible cards*:

- *Part 1: Physical characteristics*
- *Part 2: Magnetic recording technique*
- *Part 3: Test methods*

Identification cards — Thin flexible cards —

Part 2: Magnetic recording technique

1 Scope

Thin flexible cards (TFCs) are used to automate the controls for access to goods or services such as mass transit, highway toll systems, car parks, vouchers and stored value.

For these applications, data can be written and/or read by machines using various recording techniques: magnetic stripe, optical character recognition (OCR), bar code, etc.

This part of ISO/IEC 15457 specifies the magnetic stripe and encoding characteristics of thin flexible cards at two points in the card's life cycle:

- at the point of loading into the card-issuing equipment;
- at the point of issue to the public.

Guidance concerning the storage and usage of finished cards (including magnetic stripe cards) under various environmental conditions is given in ISO/IEC 15457-1.

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 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO/IEC 7811-2, *Identification cards — Recording technique — Magnetic stripe — Low coercivity*

ISO/IEC 7811-6, *Identification cards — Recording technique — Magnetic stripe — High coercivity*

ISO/IEC 15457-1, *Identification cards — Thin flexible cards — Part 1: Physical characteristics*

ISO/IEC 15457-3, *Identification cards — Thin flexible cards — Part 3: Test methods*