

## **Identification cards — Physical characteristics**

### **AMENDMENT 1: Criteria for cards containing IC's**

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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for world-wide 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. 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.

Amendment 1 to International Standard ISO/IEC 7810 was prepared by JTC1/SC17/WG1 *Physical characteristics and test methods for ID cards*.

Editor comments :

1. Tests apply to all types of IC cards except as noted.

## Identification cards — Physical characteristics

### AMENDMENT 1: Criteria for cards containing IC's

*page iv, Forward*

Add the following after point 6:

"7. Criteria for cards containing certain types of IC's has been added."

*page 6*

Add the following after clause 8.14:

### 9 Criteria for cards containing IC's

The following characteristics only apply to cards containing IC's.

#### 9.1 X-rays

The card shall continue to operate as intended after exposure of any card surface to medium-energy X-radiation as described in the test methods in ISO/IEC 10373-1, with energy in the range of 70 keV to 140 keV, of a cumulative dose of 0,1 Gy per year.

NOTE This corresponds to approximately twice the maximum acceptable dose to which humans may be exposed annually.

#### 9.2 Dynamic bending stress

The card shall continue to operate as intended after testing the card in accordance with the test methods described in ISO/IEC 10373-1 where the maximum deflections about the short and long card axes are  $h_wA = 20$  mm and  $h_wB = 10$  mm.

#### 9.3 Dynamic torsional stress

The card shall continue to operate as intended after testing in accordance with the test methods described in ISO/IEC 10373-1 where the maximum angle of rotation is  $\alpha = 15^\circ$ .

#### 9.4 Static electricity [annotate as needing experts in WG1]

##### 9.4.1 Contact IC cards

The card shall not be damaged in normal use by a person charged with static electricity.

The performance of the card shall not be degraded by exposure to a static discharge in accordance with the test methods described in ISO/IEC 10373-3 between any contact and ground of a voltage of 2000 volts through a resistance of 1500 ohm from a capacitor of 100 pf.

##### 9.4.2 Contactless IC cards

The card shall continue to operate as intended after testing in accordance with the test methods described in ISO/IEC 10373-3, where the test voltage is 6 kV.

### 9.5 Gamma rays

The card shall continue to operate as intended after testing in accordance with the applicable test methods in ISO/IEC 10373-6, when first exposed to an irradiation beam with one of the dosage exposures listed below.

| Exposure class | Irradiated dosage | Exposure(s) |
|----------------|-------------------|-------------|
| 1              | 56 kGy            | 1.0         |
| 2              | 56 kGy            | 2.0         |

### 9.6 Operating temperature

The card shall operate as intended over an ambient temperature range of 0 °C to 50 °C.