BS ISO/IEC 18745-1:2014

BSI Standards Publication

Information technology — Test methods for machine readable travel documents (MRTD) and associated devices

Part 1: Physical test methods for passport books (durability)

National foreword

This British Standard is the UK implementation of ISO/IEC 18745-1:2014.

The UK participation in its preparation was entrusted to Technical Committee IST/17, Cards and personal identification.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Part 1: Physical test methods for passport books (durability)

Technologies de l'information — Méthodes d'essais pour documents de voyage lisibles par machine et dispositifs associés —

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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 18745-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

ISO/IEC 18745 consists of the following parts, under the general title *Information technology — Test methods for machine readable travel documents (MRTD) and associated devices —*

— *Part 1: Physical test methods for passport books (durability)*

— *Part 2: Test methods for the contactless interface*

— *Part 3: Test methods for the LDS and security protocols*

0 Introduction

0.1 General

ICAO Doc 9303 provides the basic functional specification for Machine Readable Travel Documents (MRTDs) and, together with the Supplement, which is published from time to time, describes all relevant properties of MRTDs. Machine Readable Passports (MRPs) are a subset of all MRTDs. The publication of the Part 1 of the 6th edition of Doc 9303 introduces the contactless integrated circuit to the MRP. Such a passport containing a contactless integrated circuit is commonly referred to as an e-Passport.

This part of ISO/IEC 18745 provides a set of instructions for prototype evaluation of Machine Readable Passports (MRPs) which may incorporate contactless integrated circuits. Prototype evaluation is an instrument to establish the ability in principle of a specific type of document to fulfil the requirements of use. The procedure of prototype evaluation, therefore, is also referred to as "Type Evaluation".

This document is a companion to ICAO Doc 9303. It specifies the minimum criteria to be achieved in order to meet ICAO's expectations for durability of fully personalized MRPs. Therefore, by its existence, and endorsement by ICAO, this document implicitly defines additional requirements for passports above and beyond Doc 9303. Some of the tests described herein are also intended to serve as an instrument for the assessment of the ageing behaviour of the MRP and its components.

This part of ISO/IEC 18745 updates and replaces document "Technical Report – Durability Of Machine Readable Passports – Version 3.2 – Date 2006-08-30" published by ICAO (International Civil Aviation Organization).

0.2 Future Considerations

Where technologies or combinations of technologies are to be applied in a MRP, which are not covered by the test methods described below, it is recommended to define such test methods based on available methods described in ISO/IEC or any other accepted international standard organization in cooperation with the suppliers of such technologies.

Today, there is no stable state of the art regarding the correlation between stress and ageing, neither for previously existing nor for oncoming types of MRP. The tests that can be described at the present stage may contribute to improve such knowledge but need to be considered preliminary. It is important to notice that ultimately, reliable and predictably useful correlations can only be achieved by continuously comparing the ageing behaviour of documents in real use to the predictions made. Such predictions are based on assumptions that, in particular if novel and unusual technologies and components are used, are in many cases unproven and preliminary in nature.

It is one of the aims of this standard to help in the task of establishing sound correlations. This is done by providing tools for executing tests with comparable results for a multitude of acting parties. Comparable results are a prerequisite to encourage the execution of field surveys in quality related research and their use for a continuous improvement not only of this standard but also of the quality of MRPs on a global basis.

0.3 Other Uses for this Document

The tests defined in this document may also be appropriate for other forms of MRTD, however, they may require modification before use.

Where applicable, tests may be used to evaluate characteristics of non-personalized MRPs or materials used to make MRPs.

Type Evaluation is usually a one-time exercise in the life cycle of a specific type of document. However the same test procedures may be useful for the proper definition of quality assurance procedures during the regular production of MRTDs. In the framework of the contractual relationship between a manufacturer and his customer(s) it is common practice to establish an expected quality level for the MRTDs in the delivery contract, and also to specify acceptance criteria for individual deliveries in

executing the contract. On the other hand, it is good practice to leave it with the manufacturer to decide on the production quality measures to assure this quality level.

This International Standard has been carefully designed to provide the user with a set of tools for evaluating MRPs, whether it be Prototype Evaluation, Delivery Acceptance, or any other purpose.

0.4 Terminology

For ICAO, keywords are SHALL, which means mandatory, and SHOULD, which is optional but is considered best practices.

INTERNATIONAL STANDARD **ISO/IEC 18745-1:2014(E)**

Information technology — Test methods for machine readable travel documents (MRTD) and associated devices —

Part 1: Physical test methods for passport books (durability)

1 Scope

This part of ISO/IEC 18745 provides a set of instructions for prototype evaluation of Machine Readable Passports (MRPs) which may incorporate contactless integrated circuits. Prototype evaluation is an instrument to establish the ability in principle of a specific type of document to fulfil the requirements of use. It supplies a structured approach to evaluate Machine Readable Passports by:

— defining reproducible stress methods to submit the document(s) under evaluation to specific stress or environmental conditions;

— defining reproducible evaluation methods to measure numerical values for specific document properties;

— defining test sequences that specify the order in which stress methods and evaluation methods are to be performed;

— defining test plans to link specific user requirements to test sequences and related parameters.

It specifies the minimum criteria to be achieved in order to meet ICAO's expectations for durability of fully personalized MRPs.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 105-A02:1993, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*

ISO 105-E04, *Textiles — Tests for colour fastness — Part E04: Colour fastness to perspiration*

ISO 1302, *Geometrical Product Specifications (GPS) — Indication of surface texture in technical product documentation*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 2439:2008, *Flexible cellular polymeric materials — Determination of hardness (indentation technique)*

ISO/IEC 7810, *Identification cards — Physical characteristics*

ISO/IEC 7810:2003/Amd.1:2009, *Identification cards — Physical characteristics — Amendment 1: Criteria for cards containing integrated circuits*