

# ISO/IEC 18745-1:2018 (E)

## Test methods for machine readable travel documents (MRTD) and associated devices — Part 1: Physical test methods for passport books (durability)

---

### Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Abbreviated terms
5	Methodology
6	Guidance to the tester
6.1	Number of samples
6.2	Preparation
6.3	Sampling
6.4	Storage
7	Common method information
7.1	Default environment
7.2	Climatic conditions
7.3	Tolerances
7.4	Default MRP holder
8	Stress methods
8.1	Conditioning stress method
8.1.1	General
8.1.2	Input Parameters
8.1.3	Apparatus
8.1.4	Method
8.2	Thermal cycling stress method
8.2.1	General
8.2.2	Input parameters
8.2.3	Apparatus
8.2.4	Method
8.3	Storage temperature stress method
8.3.1	General
8.3.2	Input parameters
8.3.3	Apparatus
8.3.4	Method
8.4	Operational climate stress method
8.4.1	General
8.4.2	Input Parameters
8.4.3	Apparatus
8.4.4	Method
8.5	Impact stress method
8.5.1	General
8.5.2	Input parameters
8.5.3	Output parameters
8.5.4	Apparatus
8.5.4.1	Stamp

8.5.4.2	Stamp construction
8.5.4.3	Description of stamp parameters
8.5.5	Method
8.5.6	Alternate method
8.6	Book bend stress method (back pocket)
8.6.1	General
8.6.2	Input parameters
8.6.3	Output parameters
8.6.4	Apparatus
8.6.5	Method
8.7	Dynamic bend stress method
8.7.1	General
8.7.2	Input parameters
8.7.3	Output parameters
8.7.4	Apparatus
8.7.5	Calibration of movement method
8.7.6	Method
8.8	Torsion stress method
8.8.1	General
8.8.2	Input parameters
8.8.3	Output parameters
8.8.4	Apparatus
8.8.5	Calibration
8.8.6	Method
8.9	Sheet turning stress method
8.9.1	General
8.9.2	Input parameters
8.9.3	Output parameters
8.9.4	Apparatus
8.9.5	Method
8.9.6	Bending parameters
8.10	Sheet pull stress method
8.10.1	General
8.10.2	Input parameters
8.10.3	Output parameters
8.10.4	Apparatus
8.10.5	Method
8.11	Abrasion stress method
8.11.1	General
8.11.2	Input parameters
8.11.3	Output parameters
8.11.4	Apparatus
8.11.5	Method
8.12	Pen stress method
8.12.1	General
8.12.2	Input parameters
8.12.3	Output parameters
8.12.4	Apparatus
8.12.5	Method
8.13	Resistance to chemicals stress method
8.13.1	General
8.13.2	Input parameters
8.13.3	Output parameters
8.13.4	Apparatus
8.13.5	Short term contamination test
8.13.5.1	Short term reagents (list provided here for information only, defined in ISO/IEC 10373-1)
8.13.5.2	Short term contamination method
8.13.6	Long term contamination test
8.13.6.1	Long term reagents (list provided here for information only, defined in ISO/IEC 10373-1)
8.13.6.2	Method for salt mist
8.13.6.3	Method for synthetic perspiration
8.14	Artificial daylight exposure stress method
8.14.1	General
8.14.2	Input parameters

- 8.14.3 Output parameters
- 8.14.4 Apparatus
- 8.14.5 Method
- 8.15 X-ray stress method
- 8.15.1 General
- 8.15.2 Input parameter
- 8.15.3 Output parameter
- 8.15.4 Apparatus
- 8.15.5 Method
- 9 Evaluation methods
  - 9.1 Functional PIC evaluation method
    - 9.1.1 General
    - 9.1.2 Input parameters
    - 9.1.3 Output parameters
    - 9.1.4 Apparatus
    - 9.1.5 Method
  - 9.2 Physical damage evaluation method
    - 9.2.1 General
    - 9.2.2 Input parameters
    - 9.2.3 Output parameters
    - 9.2.4 Apparatus
    - 9.2.5 Method
  - 9.3 Peel strength evaluation method
    - 9.3.1 General
    - 9.3.2 Input parameters
    - 9.3.3 Output parameters
    - 9.3.4 Apparatus
    - 9.3.5 Method
  - 9.4 Colour fastness evaluation method
    - 9.4.1 General
    - 9.4.2 Input parameters
    - 9.4.3 Output parameters
    - 9.4.4 Apparatus
    - 9.4.5 Method
  - 9.5 Datapage and cover warpage evaluation method
    - 9.5.1 General
    - 9.5.2 Input parameters
    - 9.5.3 Output parameters
    - 9.5.4 Apparatus
    - 9.5.5 Method
  - 9.6 Book warpage evaluation method
    - 9.6.1 General
    - 9.6.2 Input parameters
    - 9.6.3 Output parameters
    - 9.6.4 Apparatus
    - 9.6.5 Method
- 10 Test sequences
  - 10.1 General
  - 10.2 Instructions for using the sequence table
  - 10.3 Sheet binding sequence
    - 10.3.1 General
    - 10.3.2 Input parameters
    - 10.3.3 Output parameters
    - 10.3.4 Sequence
  - 10.4 Storage climate sequence
    - 10.4.1 General
    - 10.4.2 Input parameters
    - 10.4.3 Output parameters
    - 10.4.4 Sequence
  - 10.5 Operational climate sequence
    - 10.5.1 General
    - 10.5.2 Input parameters

- 10.5.3 Output parameters
- 10.5.4 Sequence
- 10.6 Impact sequence
  - 10.6.1 General
  - 10.6.2 Input parameters
  - 10.6.3 Output parameters
  - 10.6.4 Sequence
- 10.7 Back pocket sequence
  - 10.7.1 General
  - 10.7.2 Input parameters
  - 10.7.3 Output parameters
  - 10.7.4 Sequence
- 10.8 Torsion fatigue sequence
  - 10.8.1 General
  - 10.8.2 Input parameters
  - 10.8.3 Output parameters
  - 10.8.4 Sequence
- 10.9 Delamination sequence
  - 10.9.1 General
  - 10.9.2 Input parameters
  - 10.9.3 Output parameters
  - 10.9.4 Sequence
- 10.10 Bending fatigue sequence
  - 10.10.1 General
  - 10.10.2 Input parameters
  - 10.10.3 Output parameters
  - 10.10.4 Sequence
- 10.11 Thermal cycling sequence
  - 10.11.1 General
  - 10.11.2 Input parameters
  - 10.11.3 Output parameters
  - 10.11.4 Sequence
- 10.12 Colour fastness sequence
  - 10.12.1 General
  - 10.12.2 Input parameters
  - 10.12.3 Output parameters
  - 10.12.4 Sequence
- 10.13 Resistance to chemicals sequence
  - 10.13.1 General
  - 10.13.2 Input parameters
  - 10.13.3 Output parameters
  - 10.13.4 Sequence
- 10.14 Pen sequence
  - 10.14.1 General
  - 10.14.2 Input parameters
  - 10.14.3 Output parameters
  - 10.14.4 Sequence
- 10.15 Datapage abrasion sequence
  - 10.15.1 General
  - 10.15.2 Input parameters
  - 10.15.3 Output parameters
  - 10.15.4 Sequence
- 10.16 X-ray sequence
  - 10.16.1 General
  - 10.16.2 Input parameters
  - 10.16.3 Output parameters
  - 10.16.4 Sequence

11 Test plans

- 11.1 General
- 11.2 Minimum level test plan