

First edition
2015-10-15

Identification cards — Laundry testing of ID Cards

*Cartes d'identification — Essai en blanchisserie des cartes
d'identification*

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Foreword

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/IEC JTC 1, *Information Technology*, Subcommittee SC 17, *Cards and personal identification*.

Introduction

Test methods developed in ISO/IEC 24789 are intended to reflect the factors affecting the life of a card in normal use. Accidental exposure such as laundering is not considered to be normal use. Nevertheless, many card specifiers and users are concerned that a test procedure should be drawn up and published as a recognised method. SC 17 agreed at meeting No 62 that this Technical Report was the most appropriate format for such a test. It can be used in conjunction with tests described in the base standard.

The risk of cards being laundered varies according to geographical region and national norms. In the US, for example, it is thought that most people carry their cards in a trouser pocket giving the possibility that cards are laundered with clothing. In Japan and northern Europe, cards are mainly carried in wallets with a lower risk of laundering damage.

There are a number of factors that can potentially affect cards during laundering:

- exposure to water plus detergent solution for a period of up to 2,5 hours;
- exposure to washing cycle temperatures of up to 90 °C for part of that time;
- exposure to dryer temperatures of up to 80 °C.

During the process, most cards will remain within the pocket of the garment so there is likely to be some minor physical stress due to tumbling or spinning.

In seeking to propose a test that may be considered representative of the range of conditions a card may encounter, some statistics were obtained on the current trends in laundering.

Globally, 38% of laundry loads are done with cold water (source: P&G). This proportion has not increased in spite of the introduction of new cold water detergents, although there is a trend towards the use of lower temperatures for environmental reasons.

In the USA, most users still use hot washes. Cold water detergent represents less than 15 % of US detergent sales.

Washing machines are commonly programmed to work at 30 °C, 40 °C, 60 °C, and 90 °C

The most common washing temperature used in the UK is 40 °C. 60 °C is used for heavily soiled items and 90 °C is used only rarely (source: Which magazine).

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1 Scope

This Technical Report gives guidance on the principles and methods of testing ID cards to simulate accidental exposure to conditions encountered during the washing and drying of clothing. The physical properties of a card may degrade after exposure and the test methods described may be useful for comparing different card materials or types.

Although there are many variations in the design and operation of washing machines, the operation of washing, rinsing, and water removal is common to all types of machine. For simplicity, one washing and drying cycle is specified, which is thought to be typical, according to industry sources. Additional wash cycles and/or different temperature conditions can be used for comparative purposes if desired.