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**Freight containers — RFID cargo  
shipment tag system**

*Conteneurs pour le transport de marchandises — Système d'étiquettes  
RFID d'expédition de fret*



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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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member 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 shall not be held responsible for identifying any or all such patent rights.

ISO 18186 was prepared by Technical Committee ISO/TC 104, *Freight containers*, Subcommittee SC 4, *Identification and communication*.

This first edition of ISO 18186 cancels and replaces the first edition of ISO/PAS 18186:2010.

## Introduction

This International Standard describes the composition, application requirements and operational procedures of an RFID cargo shipment tag and its relevant system used for improving transparency of the freight container transportation process. It identifies data content and format as well as operational characteristics of an RFID cargo shipment tag. It also provides a solution for electronic transfer of relevant information between an RFID cargo shipment tag and its associated information system platform.

The overall purpose of this International Standard is to improve freight container logistic transparency and efficiency by using an RFID cargo shipment tag and an associated, Internet-based information management system.



# Freight containers — RFID cargo shipment tag system

## 1 Scope

This International Standard is applicable to freight containers as defined in ISO 668 as well as other associated containers and transport equipment.

This International Standard defines how freight container logistic transparency and efficiency can be improved through use of an RFID cargo shipment tag system and an Internet-based software package. Such an RFID cargo shipment tag system can co-exist with, but is separate from, a container security and identification RFID framework using container “license plate” tags, described in ISO 10374 and ISO/TS 10891, and electronic seals (“e-seals”), described in ISO 18185 (all parts). In all cases, operation of and information from ISO/TS 10891 and ISO 18185 devices is independent from the operation and information of the cargo shipment tag and information from these devices is passed in discrete messages that are not routed via the RFID cargo shipment tag.

## 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 668, *Series 1 freight containers — Classification, dimensions and ratings*

ISO 6346, *Freight containers — Coding, identification and marking*

ISO 10374, *Freight containers — Automatic identification*

ISO/TS 10891, *Freight containers — Radio frequency identification (RFID) — Licence plate tag*

ISO 18185 (all parts), *Freight containers — Electronic seals*

IEC 60068-2 (multiple sub-parts), *Environmental testing*

IEC CISPR/TR 28, *Industrial, scientific and medical equipment (ISM)-Guidelines for emission levels within the bands designated by the ITU*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### RFID cargo shipment tag

read-write tag into which data specific to a containerized cargo shipment can be stored and the tag and the data uploaded in it are the responsibility of the shipper

**NOTE** The tag can be affixed to the container by the shipper or, as per the shipper’s instructions, by the party that physically performs the loading (“stuffing”) of the container. Data capabilities are flexible and can, at the shipper’s discretion, include destination, routing, conveyance or other transportation information, time and location of the interrogation, cargo information (including hazardous material information, where applicable) or other trip-specific information. The tag must perform reliably from the point of stuffing of the container to delivery destination, and is to be removed by the consignee upon final delivery. The tag is reusable.