



BSI Standards Publication

Air cargo — Fire-resistant containers — Design, performance and testing requirements

National foreword

This British Standard is the UK implementation of ISO 19281:2025. It supersedes BS ISO 19281:2016, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/57, Air cargo and ground support equipment.

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

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Published by BSI Standards Limited 2025

ISBN 978 0 539 22434 4

ICS 55.180.30

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2025.

Amendments/corrigenda issued since publication

Date	Text affected



**International
Standard**

ISO 19281

**Air cargo — Fire-resistant
containers — Design, performance
and testing requirements**

*Fret aérien — Conteneurs résistant au feu — Exigences de
conception, performances et essais*

**Second edition
2025-05**

Reference number
ISO 19281:2025(en)

Full document details: BS ISO 19281:2025

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General requirements	2
4.1 Approval	2
4.2 Construction	2
4.3 Materials	3
4.4 Weight	3
4.5 General design	3
4.6 Environment	4
4.7 Maintenance	5
5 Performance and testing	5
5.1 Container body	5
5.1.1 General	5
5.1.2 Base	5
5.1.3 45° Angle test	5
5.1.4 Accessories	6
5.2 Environmental testing	6
5.3 FRC assembly	6
5.4 FRC full scale test	6
5.5 Allowable damage	7
5.6 General data collection and preservation requirements	8
6 Markings	8
7 Manufacturer's instructions	9
8 Operator requirements	10
Annex A (normative) Location of thermocouples for FRC full scale test	11
Bibliography	12

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 9, *Air cargo and ground equipment*.

This second edition cancels and replaces the first edition (ISO 19281:2016), which has been technically revised.

The main changes are as follows:

- [Clause 1](#): revision of the scope;
- [Clause 3](#): revision of the original term entries 3.4 and 3.5, suppression of definitions 3.6, 3.8 and 3.9;
- [Clause 4](#): revision of the general requirements, suppression of 4.1.3, 4.2.1, 4.6.6 and 4.6.7, addition of [4.5.5](#) and [4.7.2](#);
- [Clause 5](#): revision of performance with the addition of testing ([5.2](#) “Environmental testing”, [5.4](#) “FRC full scale test”);
- [Clause 8](#) (previous Clause 9): revision of the operator requirements with the suppression of 9.2 “Operating instructions”, 9.3 “Training and qualification” and 9.4 “Quality control”.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Fatal accidents have demonstrated the risk of uncontrolled fires occurring within cargo to transport aircraft; it is evident that the use of fire protecting devices can improve flight safety.

This document specifies the design and performance criteria and testing methods for fire-resistant containers used to provide enhanced protection against cargo fires in civil transport aircraft cargo compartments.

The fire-resistant containers (FRCs) specified by this document are intended to be used to contain and restrain unitized cargo for loading into aircraft cargo compartments, for example:

- a) Class E aircraft cargo compartments according to CS-25, CCAR-25, JAS Part 3 or 14CFR Part 25 25.857 (e);
- b) Class F aircraft cargo compartments according to CS-25 § 25.857(f) and AMC to CS-25.855 and 25.857, or 14CFR Part 25 § 25.857(f) and FAA Advisory Circular AC25.857-X.

NOTE Though nothing formally prevents a fire-resistant container (FRC) from being carried in a Class C aircraft cargo compartment, it is not intended for this use since its fire containment capability is redundant with that of the aircraft's fire detection and suppression system. Current regulatory guidance materials and aircraft type's Weight and Balance Manual can be consulted whenever available.

This document only specifies the flammability requirements and fire resistance performance for FRCs. Nonetheless the other applicable general standards shall be taken into account (e.g. ISO 21100, ISO 8097, ISO 10327, ISO 11242).

The containers specified in this document shall be designed and tested at both the full-scale and component levels to demonstrate performance.

The use of fire-resistant containers meeting the requirements of this document alone is not sufficient to ensure flight safety: this document is based on the assumption that the approved fire-resistant containers are built up, installed, and checked prior to aircraft loading in accordance with appropriate operating instructions, by competent, suitably trained, personnel (see [Clause 8](#)).

Recommended criteria are, while not mandatory, considered to be of primary importance in providing fire-resistant containers meeting the applicable regulatory requirements and ensuring effective protection against fires. Deviation from recommended criteria should only occur after careful consideration, extensive testing, and thorough service evaluation have shown alternate methods to be satisfactory.

The requirements of this document are expressed in the applicable SI units, with approximate inch-pound unit conversion between brackets for the convenience of countries using that system. Where it is deemed necessary to use exact values, the values in SI units are used.