

---

---

## Aerospace fluid systems — Elastomer seals — Storage and shelf life

*Systèmes de fluides pour l'aéronautique et l'espace — Joints  
élastomères — Stockage et durée de conservation*

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

ISO 27996:2009

<https://standards.iteh.ai/catalog/standards/iso/1a8ec51d-6c5c-46f1-bd45-feac62e02824/iso-27996-2009>



**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

ISO 27996:2009

<https://standards.iteh.ai/catalog/standards/iso/1a8ec51d-6c5c-46f1-bd45-feac62e02824/iso-27996-2009>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2009

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

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)

Published in Switzerland

## 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 27996 was prepared by Technical Committee ISO/TC 20, *Aircraft and Space Vehicles*, Subcommittee SC 10, *Aerospace fluid systems and components*.

iteh Standards  
(<https://standards.iteh.ai>)  
Document Preview

ISO 27996:2009

<https://standards.iteh.ai/catalog/standards/iso/1a8ec51d-6c5c-46f1-bd45-feac62e02824/iso-27996-2009>

## Introduction

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. Components are designed to meet these requirements under varying conditions. Testing of components to meet performance requirements provides users a basis of assurance for determining design application and for checking component compliance with their stated requirements.

iTeh Standards  
(<https://standards.itih.ai>)  
Document Preview

[ISO 27996:2009](https://standards.itih.ai/catalog/standards/iso/1a8ec51d-6c5c-46f1-bd45-feac62e02824/iso-27996-2009)

<https://standards.itih.ai/catalog/standards/iso/1a8ec51d-6c5c-46f1-bd45-feac62e02824/iso-27996-2009>

# Aerospace fluid systems — Elastomer seals — Storage and shelf life

## 1 Scope

This International Standard is applicable to the general requirements for data recording procedures, packaging, and storing of elastomeric seals and seal assemblies which include an elastomeric element prior to the seal being assembled into hardware components.

The requirements for packaging are an integral part of the controlled storage procedure and provide a means of positive product identity from the time of manufacture to the time of assembly into a component.

This International Standard does not establish limitations or storage times for assembled components nor the operating life of these components.

The information contained in this International Standard is intended for use by those organizations that do not have specific requirements or recommendations already in place for the control of elastomeric seals and seal assemblies.

This International Standard can be specified in control, storage and procurement documents. However, when the requirements of this International Standard are in conflict with the customer's requirements or specifications, the requirements of the customer's detailed specifications take precedence.

## 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 1629, *Rubbers and lattices — Nomenclature*

ISO 5598, *Fluid power systems and components — Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 and the following apply.

### 3.1

#### **date of vulcanization**

date on which the elastomer product was vulcanized

NOTE Date of vulcanization is expressed in quarters (Q) of a year.

EXAMPLE 4Q08 (October to December, 2008).

### 3.2

#### **elastomer**

material that possesses elastic properties and has undergone vulcanization and/or conversion into a finished product

NOTE The basic building block of elastomer is the rubber polymer it contains.

**3.3**

**end user**

user carrying out the installation into a hardware component which can include an aircraft

**3.4**

**extended storage life**

period for which an elastomer seal element moulded from class III material and properly packaged can be stored after the initial storage period and the successful reinspection and testing of representative samples

**3.5**

**hardware component**

unit in which the elastomeric seal element is installed

**3.6**

**installation date**

date of the first installation into a hardware component

**3.7**

**limited storage life**

period of time during which an elastomeric seal element which has not been properly packaged by the manufacturer in an expedient manner after vulcanization can be installed without first testing for product integrity

**3.8**

**rubbers**

polymeric building blocks of an elastomer's chemical composition

**NOTE**

Rubbers are further defined in ISO 1629.

**3.9**

**seal**

elastomeric seal configuration or an assembly with an elastomeric element which prevents the excursion of media on one side of the product from migrating to the other side

**3.10**  
**storage life**

period of time, in quarters of a year, from the date of vulcanization until installation into a hardware component

**NOTE**

The storage life is counted from the quarter following the date of vulcanization.

**3.11**

**storage life limit**

maximum period of time, starting from the quarter following vulcanization, that an elastomeric seal element, appropriately packaged, can be stored under specific conditions, after which time it is regarded as unserviceable for the purposes for which it was originally manufactured

## **4 General**

The life of elastomeric seal elements is reduced by the influence of environmental factors, e.g. ozone, heat and light. To extend life to the full storage life limit, the seal elements shall be properly packaged and certified as such by the manufacturer as quickly as possible following vulcanization. If the seal elements are not properly packaged and certified as such by the manufacturer, then the limited storage life requirement is followed and package labels shall indicate this.