



**International
Standard**

ISO 27996

**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*

**Second edition
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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.

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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 10, *Aerospace fluid systems and components*.

This second edition cancels and replaces the first edition (ISO 27996:2009), which has been technically revised.

The main changes are as follows:

- change of the term [3.1](#) “date of vulcanization” to “cure date”;
- extension of shelf life for EPDM ([Table 2](#)) based upon practical experience.

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

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

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

This information is intended to be utilized by those organizations who do not have specific requirements or recommendations already in place for the control of elastomeric seals and seal assemblies. This standard can be specified in control, storage, and procurement documents. However, when the requirements of this document are in conflict with the customer's requirements or specifications, the requirements of the customer's detailed specification govern.

Aerospace fluid systems — Elastomer seals — Storage and shelf life

1 Scope

This document specifies 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.

This document does not establish limitations or storage times for assembled components, or the operating life of the said components.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Rubber and latices — 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.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 cure date

the date on which the *elastomer* (3.2) product was vulcanized, expressed in quarters (Q) of a year

EXAMPLE 4Q04 (October to December, 2004).

3.2 elastomer

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

Note 1 to entry: The basic building block of the elastomer is the *rubber* (3.6) polymer it contains.

3.3 extended storage life

period for which an *elastomer* (3.2) *seal* (3.7) element moulded from class III material and properly packaged may be stored after the initial storage period and the successful reinspection and testing of representative samples

3.4 hardware component

unit in which the elastomeric *seal* (3.7) element is installed