



SLOVENSKI STANDARD
SIST EN 2796:2018

01-oktober-2018

Aeronavtika - Fluorogljikove gume (FKM) - Nizka stopnja kompresije - Trdota 60 IRHD

Aerospace series - Fluorocarbon rubber (FKM) - Low compressions set - Hardness 60 IRHD

Luft- und Raumfahrt - Fluorocarbon-Elastomer (FKM) - Niedriger Druckverformungsrest - Härte 60 IRDH

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Série aérospatiale - Élastomère fluoré (FKM) - Faible déformation rémanente après compression - Dureté 60 DIDC

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Ta slovenski standard je istoveten z: EN 2796:2018

ICS:

49.025.40 Guma in polimerni materiali Rubber and plastics

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EUROPEAN STANDARD

EN 2796

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2018

ICS 49.025.40

English Version

Aerospace series - Fluorocarbon rubber (FKM) - Low compressions set - Hardness 60 IRHD

Série aérospatiale - Élastomère fluoré (FKM) - Faible déformation rémanente après compression - Dureté 60 DIDC

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This European Standard was approved by CEN on 20 November 2017.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 2796:2018) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 20219, and conflicting national standards shall be withdrawn at the latest by February 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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EN 2796:2018 (E)**1 Scope**

This European Standard specifies the properties of fluorocarbon rubber (FKM)¹⁾, low compression set, hardness 60 IRHD, for aerospace applications.

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.

EN 3207, *Aerospace series — Rubber compounds — Technical specification*

ISO 1629, *Rubber and latices — Nomenclature*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

4 Application of the material**4.1 General**

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The suitability of the material for a specific application shall be determined by complementary tests carried out on the finished product as the properties specified in this European Standard are obtained from standard test specimens.

4.2 Typical use

Application requiring a resistance to air, hydrocarbon and synthetic oils, fuels at elevated temperature and low compression set properties.

4.3 Temperature range

- Continuous service: from -20 °C to 225 °C;
- Intermittent service: from -20 °C to 250 °C.

5 Properties

See Table 1 and Table 2.

For qualification, all tests shall be performed.

For batch acceptance, those identified “*” shall be performed.

¹⁾ Symbol as per ISO 1629.

Table 1 – Test methods

Line	Column		
	1	2	3
	Properties	Units	Requirements
1	Hardness	IRHD	60 ⁺⁵ ₋₄ *
2	-	-	-
3	Density	Mg/m ³	a *
4	-	-	-
5	Tensile strength	MPa	10 min. *
6	-	-	-
7	Elongation at break	%	180 min. *
8	-	-	-
9	Modulus at ... % strain	MPa	-
10	-	-	-
11	Tear strength	N/mm	-
12	-	-	-
13	Resistance to low temperatures TR10	°C	- 12 max.
14	Crystallization	Point	-
15	Compression set	(standards.itech.ai)	-
15.1	After 70 h to 200 °C	%	25 max. *
15.2	After ... h to ... °C		-
16		-	-
17	Ozone resistance Ozone concentration : (... ± ...) pphm Elongation of test piece : ... % Time : ... h Temperature : ... °C	-	-
18	-	-	-
19	Corrosion and adhesion on metals in a dry atmosphere Time : 168 h Temperature : 200 °C	-	no corrosion no adhesion
20	Corrosion and adhesion on metals	-	-
20.1	Time : ... h Temperature : ... °C Humidity : ... %		
20.2	Time : ... h Temperature : ... °C Humidity : ... %		
30	-	-	-
39	-	-	-

* See Clause 4.

a The value determined for each batch shall not differ from that determined at qualification by more than 0,03 Mg/m³.

Table 2 — Tests after exposure to test media

Line	Column					
	1	2	3	4	5	
1	Test media	-	Air	Liquid B, see ISO 1817	Fluid 101, see ISO 1817	
2	Conditions of exposure in test media	Units	70 h/250 °C	70 h/23 °C	70 h/200 °C	
3	Permitted variation of the properties compared to the initial value	Volume	%	-	+ 10 0	+ 15 0
4		Mass	%	- 5 max. *	-	-
5		Tensile strength	%	- 20 max.	-	-
6		Elongation at break	%	- 20 max.	-	-
7		Hardness	IRHD	±5 *	±5	0 - 15

* See Clause 4.

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6 Designation

EXAMPLE

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Description block

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RUBBER

EN2796

Number of this standard

7 Technical specification

See EN 3207.