SLOVENSKI STANDARD
SIST EN 3825:2015

01-marec-2015

Aeronavtika - Fluorosilikonska guma (FVMQ) - Trdota 60 IRHD

Aerospace series - Fluorosilicone rubber (FVMQ) - Hardness 60 IRHD

Luft- und Raumfahrt - Fluorsilikon - Elastomer (FVMQ) - Härte 60 IRHD

Série aérospatiale - Élastomère fluorosilicone (FVMQ) - Dureté 60 DIDC

Ta slovenski standard je istoveten z: **EN 3825:2014**

ICS:

49.025.40 Guma in polimerni materiali Rubber and plastics

SIST EN 3825:2015 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 3825

December 2014

ICS 49.025.40

English Version

Aerospace series - Fluorosilicone rubber (FVMQ) - Hardness 60 IRHD

Série aérospatiale - Élastomère fluorosilicone (FVMQ) - Dureté 60 DIDC

Luft- und Raumfahrt - Fluorsilikon - Elastomer (FVMQ) - Härte 60 IRHD

This European Standard was approved by CEN on 21 June 2014.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 3825:2014 E

Contents

Foreword

This document (EN 3825:2014) 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 June 2015, and conflicting national standards shall be withdrawn at the latest by June 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the properties of fluorosilicone rubber (FVMQ)[1)], hardness 60 IRHD, for aerospace applications.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 1817, *Rubber, vulcanized — Determination of the effect of liquids.*

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

3 Application of the material

3.1 General

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 standard are obtained from standard test specimens.

3.2 Typical use

In contact with petroleum based fluids, aviation fuels, hydraulic fluids, lubricants, greases, silicone oil and some ester based fluids (not phosphate esters).

3.3 Temperature range

— Continuous service: from – 55 °C to 180 °C;

— Intermittent service: from – 55 °C to 200 °C.

4 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 Properties	Column 2 Units	Column 3 Requirements
1	Hardness	IRHD	60 $^{+5}_{-4}$ *
2	–	–	–
3	Density	Mg/m^3	[a] *
4	–	–	–
5	Tensile strength	MPa	5 min. *
6	–	–	–
7	Elongation at break	%	150 min. *
8	–	–	–
9	Modulus at … % strain	MPa	–
10	–	–	–
11	Tear strength	N/mm	–
12	–	–	–
13	Resistance to low temperatures TR10	°C	– 55 max.
14	Crystallization	Point	–
15	Compression set	%	–
15.1	After 70 h to 150 °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 Time : … h Temperature : … °C	–	–
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 0,02 Mg/m^3.

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/200 °C	70 h/23 °C	70 h/150 °C
3	Permitted variation of the properties compared to the initial value	Volume	%	–	+ 25 *	+ 12 *
4		Mass	%	–	–	–
5		Tensile strength	%	– 30	–	– 40
6		Elongation at break	%	– 35	–	– 30
7		Hardness	IRHD	+ 10 – 5	–	0 – 12

* See clause 4.

5 Designation

EXAMPLE

Description block	Identity block
RUBBER	EN3825

Number of this standard

6 Technical specification

EN 3207.