



**SLOVENSKI STANDARD**  
**SIST EN 2837:2012**

**01-september-2012**

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**Aeronavtika - Kloroprenska guma - Toplotna odpornost - Trdota 60 IRHD**

Aerospace series - Chloroprene rubber (CR) - Heat resistance - Hardness 60 IRHD

Luft- und Raumfahrt - Chloropren-Elastomer (CR) - Wärmebeständig - Härte 60 IRHD

Série aérospatiale - Élastomère chloroprène (CR) - Résistant à la chaleur - Dureté 60 DIDC

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**ICS:**

49.025.40 Guma in polimerni materiali Rubber and plastics

**SIST EN 2837:2012**

**en**

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EUROPEAN STANDARD

EN 2837

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2012

ICS 49.025.40

English Version

## Aerospace series - Chloroprene rubber (CR) - Heat resistance - Hardness 60 IRHD

Série aérospatiale - Élastomère chloroprène (CR) -  
Résistant à la chaleur - Dureté 60 DIDC

Luft- und Raumfahrt - Chloropren-Elastomer (CR) -  
Wärmebeständig - Härte 60 IRHD

This European Standard was approved by CEN on 21 January 2012.

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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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## Foreword

This document (EN 2837:2012) 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of an identical text or by endorsement, at the latest by September 2012, and conflicting national standards shall be withdrawn at the latest by September 2012.

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, 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.

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**EN 2837:2012 (E)****1 Scope**

This European Standard specifies the properties of chloroprene rubber (CR) <sup>1)</sup> heat resistant, 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.

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

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

**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**

For applications where resistance to atmospheric ageing and ozone attack is required coupled with moderate resistance to petroleum based fuels and lubricants.

**3.3 Temperature range**

- Continuous service : from 40 °C to 120 °C;  
 — Intermittent service : from – 40 °C to 150 °C.

**4 Properties**

See Table 1 and Table 2 according to EN 3207.

For qualification, all tests shall be performed.

For batch acceptance, the tests identified with footnote "\*" in Table 1 and Table 2 shall be performed.

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1) Symbol as per ISO 1629.

Table 1 — Test methods

Line	Column		
	1	2	3
	Properties	Units	Requirements
1	Hardness	IRHD	60 <sup>+ 5</sup> - 4 *
2	—	—	—
3	Density	Mg/m <sup>3</sup>	<sup>a</sup> *
4	—	—	—
5	Tensile strength	MPa	13 min. *
6	—	—	—
7	Elongation at break	%	300 min. *
8	—	—	—
9	Modulus at ... % strain	MPa	—
10	—	—	—
11	Tear strength	N/mm	—
12	—	—	—
13	Resistance to low temperatures TR 10	°C	- 30 max.
14	Crystallization 168 h at 10 °C	Point	+ 5
15	Compression set		—
15.1	After 24 h to 125 °C	%	40 max. *
15.2	After ... h to ... °C		—
16	—	—	—
17	Ozone resistance Ozone concentration : (50 ± 5) pphm Elongation of test piece : 20 % Time : 70 h Temperature : 30 °C	—	nil cracking
18	—	—	—
19	Corrosion and adhesion on metals Time : 168 h Temperature : 100 °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 : ... %	—	—
21	—	—	—
22	—	—	—
23	—	—	—
24	—	—	—
25	—	—	—
26	—	—	—
27	—	—	—
28	—	—	—
29	—	—	—
30	—	—	—

\* Test for batch accepted.

<sup>a</sup> The value determined for each batch shall not differ from that determined at qualification by more than 0,02 Mg/m<sup>3</sup>.

Table 2 — Tests

Line	Column						
	1	2	3	4	5		
1	Test media	–	Air	Liquid B, see ISO 1817	–		
2	Conditions of exposure in test media	Units	70 h/125 °C	70 h/23 °C	–		
3	Permitted variation of the properties compared to the initial value	Volume	%	–	+ 75 *	–	
4		Mass	%	–	–	–	
5		Tensile strength	%	+ 15 – 10	*	–	–
6		Elongation at break	%	+ 5 – 30	*	–	–
7		Hardness	IRHD	+ 10 0	*	–	–
8	–	–	–	–	–	–	

\* Test for batch acceptance.

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## 5 Designation

EXAMPLE

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EN 2837

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## 6 Technical specification

See EN 3207.