

Standard Reference Elastomers (SRE): BAM-E009

Elastomer ISO 13226 SRE-NBR 28/SX

1. Scope and field application

These SREs are representative of low-sulfur-cured NBR materials such as are used, e. g., for parts in contact with petroleum products in the mechanical-engineering and automotive sector.

They are used for the characterization of service fluids such as mineral oils, fuels, lubricants, hydraulic fluids, coolants and refrigerants with regard to their effect on vulcanized nitrile rubbers.

The changes in mass, volume, hardness, tensile strength and elongation at break of the SRE when in contact with the service fluid under specified conditions may be included as supplementary data in specifications for the fluid concerned.

2. Formulation of the rubber mixture

Parts by mass

a)	NBR with 28 % by mass of acrylonitrile (Perbunan NT 2845)	100,0
b)	Antidegradant TMQ (Vulkanox HS)	2,0
c)	Zinc oxide (Zinkoxyd aktiv)	5,0
d)	Stearic acid	1,0
e)	Carbon black N 550 (Corax N 550)	65,0
f)	Accelerator TBzTD	2,5
g)	Accelerator CBS (Vulkacit CZ)	1,5
h)	Sulphur	0,2

Conditions of vulcanization: 160 °C, 20 min

3. Specifications

a)	Density according to ISO 2781	(1,19 - 1,23) g/cm ³
b)	Hardness according to ISO 48-4	(76 - 81) Shore A
	Hardness according to ISO 48-2	(76 - 81) IRHD
c)	Tensile strength according to ISO 37	(20 - 25) MPa
d)	Elongation at break according to ISO 37	(300 - 400) %
e)	Increase in mass in liquid B for fuels, as in ISO 1817; 23 °C, 22 h	(26 - 29) %

4. Dimensions

2 mm x 181 mm x 181 mm

5. Storage

Cool, dry, protected from light and kept in a protective cover (e.g. polyethylen bag) completely closed.

6. Guarantee

If used properly: 1 year.

7. Identification

The standard reference elastomer sheet is labelled indicating the producer (BAM), the year of production, the standard, the type of SRE and serial number.

8. Note

This elastomer contains n-nitrosamine. Please pay attention to storage and handling regulations.

The SRE is produced, certified and supplied by

Bundesanstalt für Materialforschung und -prüfung (BAM)

[Division 7.5](#)

Unter den Eichen 87
12205 Berlin

Tel.: +49 (0) 30 8104-3230, -1749

Fax: +49 (0) 30 8104-1707

Email: crm-elastomer@bam.de

Webshop: <https://www.webshop.bam.de/>