

Standard Reference Elastomers (SRE): BAM-E011

Elastomer ISO 13226 SRE-HNBR/1X

1. Scope and field application

These SREs are representative of saturated HNBR 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 fully hydrogenated 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)	HNBR with 39 % by mass of acrylonitrile (Therban A 3907)	100,0
b)	Antidegradant SDPA (Vulkanox DDA)	1,0
c)	Zinc oxide (Zinkoxyd aktiv)	2,0
d)	Magnesium oxide (Maglite DE)	2,0
e)	Carbon black N 550 (Corax N 550)	50,0
g)	Triallylisocyanurate (Perkalink 301)	1,5
h)	1,3-bis(t-butylperoxyisopropyl)-benzene, 40 % by mass (Perkadox 14/40)	7,5

Conditions of vulcanization: 180 °C, 20 min

3. Specifications

a)	Density according to ISO 2781	(1,16 - 1,20) g/cm ³
b)	Hardness according to ISO 48-4	(72 - 77) Shore A
	Hardness according to ISO 48-2	(72 - 77) IRHD
c)	Tensile strength according to ISO 37	(24 - 29) MPa
d)	Elongation at break according to ISO 37	(250 - 310) %
e)	Increase in mass in liquid B for fuels, as in ISO 1817; 23 °C, 22 h	(20 - 24) %

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.

The SRE is produced, certified and supplied by

Bundesanstalt für Materialforschung und -prüfung (BAM)

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