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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Rubber - Standard reference elastomers (SREs) for
characterizing the effect of liquids on vulcanized rubbers**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document is equivalent to ISO 13226:2018 "Rubber is used to characterize the influence of liquid on vulcanized rubber

(SREs)":

The following minimal editorial changes have been made to this document:

---In the first paragraph of all appendices, the name of the rubber type is uniformly expressed in the form of "Chinese name (English letter abbreviation)" for easy understanding and

use;

---Added the content of footnote e in Table C:1 "When using TBzTD, it is advisable to increase the mass fraction of carbon black so that the performance of the test piece conforms to Table C:3

Requirements for the additional performance of the initial form";

--- Added the footnote content of the article "The product information may change, and it needs to be selected according to the actual situation":

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

With the continuous development of science and technology, the requirements for rubber products in various fields are getting higher and higher: In mechanical engineering, automotive, aerospace and many other

In the field of parts in contact with petroleum products, rubber products are often used as liquid-resistant materials, and the service life and safety of rubber products

Both are closely related to its liquid resistance, so the liquid resistance of rubber has been regarded as one of the important parameters to evaluate the performance of rubber:

Although Oak

There are related detection methods for the liquid resistance of rubber, but because there is no standard reference material as a reference, the grade evaluation of rubber liquid resistance

Judgment and the impact of different working fluids on the liquid resistance of rubber cannot be accurately determined:

To address these issues, documentation of standard reference elastomers for characterizing the effects of liquids on vulcanizates is required: in this document

The standard reference elastomer provided can represent the vulcanized rubber to be tested under the same conditions, and the obtained results can be judged to be the same or related

The liquid resistance of the rubber to be tested provides data support: At the same time, it can also be used to characterize the standard reference bomb by characterizing different working liquids or test liquids:

To provide producers and users of commercial working fluids with relevant data on differences in fluid performance or fluid specification characteristics

Provide technical support for the production and research and development of working fluids or test fluids:

The material covered by this document is specified in Appendices A through N:

The compounding and preparation process ensures that the performance characteristics of the material are fully consistent with those of the represented material group, while the

simple formulation ensures

Reliable reproducibility is guaranteed:

Rubber is used to characterize the effect of liquids on vulcanized rubber

Standard Reference Elastomers (SREs)

Caution 1 --- Personnel using this document should have practical experience in formal laboratory work: This document does not indicate all possible safety

In case of problems, the user is responsible for taking appropriate safety and health measures and ensuring compliance with the conditions stipulated in the relevant national laws and regulations:

Warning 2 --- Some of the steps specified in this document may involve the use or generation of certain wastes, which may cause harm to the local environment:

Appropriate safe handling and post-use disposal of waste should be specified in relevant documents:

1 Scope

This document specifies requirements for standard sheet vulcanizates for characterizing resistance to test and operating fluids:

This document is not intended to provide compositional formulations of elastomeric products for practical application:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document:

GB/T 533-2008 Determination of density of vulcanized rubber or thermoplastic rubber (ISO 2781:2007, IDT)

Note: GB/T 528-2009 Determination of tensile stress-strain properties of vulcanized rubber or thermoplastic rubber (ISO 37:2005, IDT)

ISO 48 Determination of hardness of vulcanized rubber or thermoplastic rubber (10IRHD~100IRHD) [Rubber, vulcanized or

Note: GB/T 6031-2017 Determination of hardness of vulcanized rubber or thermoplastic

rubber (10IRHD~100IRHD) (ISO 48:2010, IDT)

Note: GB/T 1690-2010 Test method for liquid resistance of vulcanized rubber or thermoplastic rubber (ISO 1817:2005, MOD)

Note: GB/T 20739-2006 Guidelines for Storage of Rubber Products (ISO 2230:2002, IDT)

ISO 2393 Rubber test compound batching, mixing and vulcanization equipment and operating procedures (Rubbertestmixes-

Note: GB/T 6038-2006 Rubber test rubber batching, mixing and vulcanization equipment and operating procedures (ISO 2393:1994, MOD)

ISO 7619-1 Test methods for indentation hardness of vulcanized or thermoplastic rubber - Part 1: Shore durometer method (Shore hardness)

Note: GB/T 531:1-2008 Test method for indentation hardness of vulcanized rubber or thermoplastic rubber Part 1: Shore durometer method (Shore hardness)

(ISO 7619-1:2004, IDT)

Note: GB/T 2941-2006 Rubber Physical Test Methods Specimen Preparation and Adjustment General Procedures (ISO 23529:2004, IDT)