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GB/T 29611-2013

Rubber, raw - Determination of the glass transition temperature - Differential scanning calorimetry (DSC)

生橡胶 玻璃化转变温度的测定 差示扫描量热法（DSC）

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard uses the translation method identical with ISO 22768:2006 "raw rubber with differential scanning calorimetry (DSC) determination of the glass transition temperature".

Correspondence between the consistency of the standards of international documents and normative references of the following documents.

--- GB/T 2941-2006 rubber physical test method for preparing and conditioning General procedures (ISO 23529:2004, IDT)

--- GB/T 14838-2009 determine Rubber and rubber products precision test method standards (ISO/T R9272.2005, IDT) the standard proposed by China Petroleum and Chemical Industry Association.

This standard by the national Common test methods for rubber and rubber goods Technical Committee of Standardization Technical Committee (SAC/TC35/SC2) Centralized.

This standard was drafted. CE Rubber Co., Ltd. tournament round, Shanghai Double Coin tire company, Shandong Linglong tires Limited, China Research Institute of Dushanzi Petrochemical Company Limited Oil and Gas, Beijing Rubber Industry Research and Design Institute.

1 Scope

This standard specifies the raw rubber glass transition temperature (Tg) determined by the method with a differential scanning calorimeter (DSC).

This standard applies to the determination of the temperature of raw rubber glass transition.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references,

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the latest edition (including any amendments) applies to this document.

GB/T 19466.1-2004 plastic differential scanning calorimetry (DSC) - Part 1. General (ISO 11357-1:1997, IDT) ISO/T R9272 Rubber and rubber products - Determination of precision for test method standards (Rubberandrubberproducts-Determinationofprecisionfortestmethodstandards) ISO 23529 rubber physical test method for sample preparation and conditioning General Procedure (Rubber-Generalproceduresfor preparingandconditioningtestpiecesforphysicaltestmethods)

3 Terms and Definitions

GB/T 19466.1-2004 and as defined in the following terms and definitions apply to this document.

The glass transition Glass and reversible transition between a high elastic state of amorphous polymers or amorphous regions of semi-crystalline polymers.

The glass transition temperature Tg the approximate midpoint of the temperature of the glass transition temperature range.

Note: This standard is defined as the glass transition temperature by a temperature rise rate of 20 °C/min to obtain a DSC curve turning point.

Principle 4

In an atmosphere and a predetermined temperature control program, enthalpy measured by DSC rubber variation with temperature, determined by the resulting curve the glass transition temperature.

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