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

GB/T 12832-2008

Replacing GB/T 12832-1991

**Rubber -- Determination of crystallization effects by hardness
measurements**

橡胶结晶效应的测定 硬度测量法

(English Translation)

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Foreword

This standard is identical with ISO 3387:1994 (English Version) "rubber used to measure the effect of crystallinity measured hardness." this standard replaces GB/T 12832-1991 "rubber crystallization effects by hardness measurements." this standard is equivalent translation ISO 3387:1994. Normative reference document, GB/T 2941 identical with ISO 23529:2004, which at the same time instead of ISO 471, ISO 3383, ISO 4661-1, on exactly the same technical content.

For ease of use, this standard also made the following editorial changes.

- a) "this International Standard" be replaced by "this standard";
- b) use a decimal point instead of a decimal comma ",", ".", ";";
- c) Remove international standards foreword.

This standard compared with GB/T 12832-1991 main changes are as follows.

--- References to normative adjusted. This edition Normative references GB/T 6031 simultaneously replaces the 1991 edition cited with standard GB/T 6031, GB/T 9866, GB/T 11207, and has been published; with GB/T 2941 at the same time replace the 1991 edition Referenced standard GB/T 2941, GB/T 9865, GB/T 9868 (see Chapter 2).

--- To select the size of the sample thickness made clear. In this edition the size of the sample thickness is determined according to the hardness of the sample when, on the hardness range of rubber samples were clearly defined (see 5.1).

--- For hardness measurements with the new requirements. In this edition, when using the method specified in the instrument L, and when the hardness exceeds 35IRHD Hardness

values obtained by the calculation method in GB/T 6031, whereas no less than the case when the initial hardness 85IRHD Make regulations (see 6.1).

--- Initial hardness measured at the test temperature with the new requirements. In this edition of the initial test temperature hardness measurements that the initial step is not greater than the hardness of the material for the 85IRHD (see 6.3).

--- Increase in the content of the test report (see Chapter 9).

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Rubber and rubber products Standardization Technical Committee rubber physical and chemical test methods Technical Committee (SAC/TC35/SC2) centralized.

This standard was drafted. Rubber Group in Shenyang Rubber Research Institute.

1 Scope

This standard specifies the method to determine the hardness measurement of rubber over time due to crystallization caused by the gradual hardening effect. It is limited in the trial Under the initial test temperature hardness of the material 10IRHD ~ 85IRHD.

This standard applies to raw rubber, uncured (compounding) Determination of rubber and vulcanized rubber. It is mainly applied at low temperatures obvious tendency to crystallize Rubber, such as neoprene and natural rubber.

This standard does not apply at a test temperature adjustment within 15min reach rapid crystallization material relatively high crystallinity.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 2941 rubber physical test method for preparing and conditioning General Procedure (GB/T 2941-2006, ISO 23529:2004, IDT) GB/T 6031-1998 Determination of vulcanized rubber or thermoplastic rubber hardness (10 ~ 100IRHD) (idt ISO 48:1994) Principle 3 the following quantities are measured in the sample is placed at a predetermined temperature of.

- a) increase the hardness value after a certain time;
- b) the hardness value to a predetermined time required.

Different sample thickness measured hardness values \u200b\u200bare not necessarily the same comparative tests shall be performed on a sample of the same thickness.

Different methods of data calculation, report the results may be different, so different methods of value should not be compared.

4.1 Cryogenic tank

According to the provisions of GB/T 2941, and the cryogenic tank with gas as a heat transfer medium, the temperature control should be maintained within ± 1 °C.

The entire operation and measurements are performed at a low temperature chamber temperature during operation of the sample should remain within the allowable range. This Modes of operation can be a suitable means to complete, allowing the operator to operate the instrument outside the cold box (for example. the use of the door or box Hand wall of the hole and gloves to operate).

4.2 Hardness

Hardness should be consistent with the provisions of GB/T 6031-1998 of. If you use a lubricant, it should be used not to make the instrument at the test temperature Caused by friction between the lubricant.

4.3 Tweezers or clamps

For holding a sample.

4.4 Gloves

Used to operate the test equipment.

4.5 Vulcanizing machine

Used to prepare raw rubber, unvulcanized sample (mixing) gum.

GB/T 12832-2008/ISO 3387:1994