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

GB/T 13642-2015

Replacing GB/T 13642-1992

**Rubber, vulcanized or thermoplastic -- Resistance to ozone
cracking -- Dynamic strain testing**

硫化橡胶或热塑性橡胶 耐臭氧龟裂 动态拉伸试验

(English Translation)

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Foreword

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

This standard replaces GB/T 13642-1992 "resistance to ozone aging test of vulcanized rubber dynamic tensile test method" and GB/T 13642-the main technical changes compared to 1992 are as follows.

- Increasing the term (see Chapter 3);
- Added "ozone concentration adjustment" (see 5.3);
- Added "ozone concentrations measured" (see 5.4);
- Added "method of adjusting airflow" and adjust the gas flow rate to the provisions of the section (see 5.5, 1992 Version 6.4.);
- Modify the size of the sample (see Chapter 6, Chapter 5, 1992 edition);
- Modify the state of the specimen adjustment (see Chapter 7, 1992 edition 6.7);
- Modify the test conditions of ozone concentration (see 8.1, 1992 Version 6.1.);
- Modify the maximum elongation (see 8.4, 1992 Version 6.5.);
- Modify the test results indicate (see Chapter 10, Chapter 8, 1992 edition).

The standard reference method using redrafted ISO 1431-1:2004 "vulcanized rubber or thermoplastic rubber Resistance to ozone cracking - Part 1.

Static and dynamic tensile testing "preparation, and ISO 1431-1:2004 is equivalent to the degree of non-conformity.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standardization Technical Committee rubber and rubber products, Common test methods for Club (SAC/TC35/SC2) centralized.

This standard was drafted. Guangzhou Institute of Materials Co., Ltd., Jiangsu Pearl Test Machine Co., Ltd., Beijing Rubber Industry Research Institute, Ltd. tournament round.

1 Scope

This standard specifies the vulcanized rubber or thermoplastic rubber under dynamic tensile strain, exposure to air a certain concentration of ozone and in Regulation Fixed temperature and no light test methods for resistance to ozone environment under the direct influence of cracks performed.

This standard applies to vulcanized rubber or thermoplastic rubber.

Note 1: The relative ozone resistance of different rubbers which depends on the conditions, in particular ozone concentration and temperature, and therefore trying to promote the results of standard tests the case should be used with extreme caution. In addition, the aging of the results of tensile test specimens with a thin and practical application of the article due to the size, shape Shape and deformation of different differences.

Note 2: The method for determining the concentration of ozone, see ISO 1431-3.

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

GB/T 2941 rubber physical test method for preparing and conditioning General Procedure (GB/T 2941-2006, ISO 23529:2004, IDT) GB/T 11206 Rubber aging test surface cracking method ISO 1431-3 vulcanized rubber or thermoplastic rubber Resistance to ozone cracking - Part 3. Determination of ozone concentration in laboratory test box Reference method and alternative methods (Rubber, vulcanized or thermoplastic-Resistance to ozone cracking-Part 3. Reference and alternative methods for determining the ozone concentration in laboratory test chambers)

3 Terms and Definitions

The following terms and definitions apply to this document.

Dynamic strain Strain at the selected repetition rate or frequency sinusoidal form changes over time (typically tensile strain).

4 Test principle

The vulcanized rubber or thermoplastic rubber samples in a continuous or intermittent dynamic tensile strain dynamic stretching and static stretching alternating strain Under

constant exposure to air containing ozone concentration and the temperature of the sealed chamber, the sample according to a predetermined time cracking cases were detected.

Under the selected concentration of ozone and ozone cracking evaluation test temperature conditions may optionally follows.

a) after the test prescribed time, check whether the sample cracks appear, if desired degree of cracking can be measured sample;