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

GB/T 2942-2009

Replacing GB/T 2942-1991

**Rubber, vulcanized -- Determination of static adhesion to textile
cord -- H-pull test**

硫化橡胶与纤维帘线静态粘合强度的测定 H抽出法

(English Translation)

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Foreword

This revised standard adopts ISO 4647. 1982 "Rubber, vulcanized fiber cord static adhesion strength measurement H extraction method" (English Chinese Version).

This standard replaces GB/T 2942-1991 "vulcanized rubber and fabric adhesive strength measurement H extraction method." this standard and ISO 4647. 1982 as compared to the main technical differences and the reasons are as follows.

--- In Chapter 2 normative references added "ISO 5893 Rubber & Plastics stretching, flexing and compression testing machine (constant speed) TECHNOLOGY Art performance. "Make test equipment conforming to the standard technical requirements.

5.1 --- in the mold, the "strip specimen having a thickness of $Y/2$, and into the spacing is Z , a width of the two cavities C vulcanization system Preparation. "To" strip specimen having a thickness of $Y/2$, and into the spacing of Z , X a width of preparing two mold cavities vulcanization. "so that and mold the figure marked consistent.

--- In 5.2 "by tension cords at one end of each cord hanging $50g \pm 1g$ of weight obtained and placed in the mold level Remove the front panel press vulcanization vulcanizing machine. "To" cord tension can be suspended by a certain quality in the end of each cord weight obtain. Weight can be designed as a hook or a clamp can clamp the cords, typically $50g \pm 1g$. The mold into flat the vulcanizing press vulcanization, is removed after the end of the hammer. "Avoid tension device is removed prior to press vulcanization shrinkage caused by cord Deviation and bending.

--- The 5.3 "5.3 test equipment, test equipment comply with verification requirements to provide accurate force value during the test, the holder should a predetermined constant speed of $100mm/min \pm 10mm/min$ Mobile. "To" instrument calibration to meet the ISO 5893 begging. Measuring force value specified in compliance with ISO 5893 Class 2 accuracy. The holder should be at a constant predetermined speed $100mm/min \pm 10mm/min$ Mobile. "So that the test instrument meets the current technical requirements.

--- Delete a sample holder 5 shown in Figure 5.4. Not because the domestic use of this sample holder.

--- 6.1 sample size, considering that the majority of domestic use cords embedded width of 10.0mm, 10.0mm in thickness or width is 5mm, thickness 3.2mm the test specimens, the "standard sample should be made a length of the cord is buried in the width 6.4mm, 3.2mm thickness of the strip is made. "Changed to" by the specimen should be buried in a length of cord width 6.4mm, 3.2mm thickness of the strip is made. It can also be used as the cord was embedded in a width 10.0mm, thickness or 10.0mm width is 5mm, thickness of 3.2mm rubber compound. However, samples with different overhang length of the specimens the experimental results are not comparable. "

--- Remove the ISO 4647. 1982 6.2.4 The provisions on the use of prefabricated die; because in the curing process, the domestic rarely used Prefabricated modules.

--- "The mold was placed in preheated to a curing temperature vulcanizing machine, remove the tension on the cord from the device. Adjust the pressure so that the mold table Face pressure to a minimum pressure of 3.5MPa vulcanization. Curing the predetermined time immediately after the samples were removed from the mold, and Cooled at room temperature. "To" mold into preheated to a curing temperature vulcanizing machine, the regulatory pressure on the mold surface the minimum pressure of 3.5MPa vulcanization. Cure to the specified time, the tension device is removed from the cord immediately from the mold the samples were removed and cooled at room temperature. "And 5.2 consistent.

--- Added "samples after curing there should be no lack of glue, bubbles, flattening cord injury and other defects." Avoid defects affect the results of the sample test.

--- The results are shown in Chapter 11 to add "and the arithmetic mean of the results, accurate to one decimal place."

--- Chapter 12 Test report removed "clamp type", and 5.4 consistent.

--- Added Appendix A, this standard and ISO 4647. 1982 reg number table.

--- Original Appendix A to B "to prepare a silicone rubber cover gutter" Appendix.

The main difference compared with the standard GB/T 2942-1991 as follows.

--- Modify the standard name;

--- Increasing the foreword;

--- Chapter 2 normative references deleted GB 527 and GB 6038, an increase of ISO 5893 (see Chapter 2);

--- Adds a schematic view of the mold and Figures 2 and 3 shown in Figure 3 two sample preparation methods (see 5.1);

--- Increased holder schematic Note (1991 edition Figure 2; Figure 4 edition);

--- The "For provide $0.49 \pm 0.01\text{N}$ cord tension device, in the preparation of samples in one end of each cord hanging $50\text{g} \pm 1\text{g}$ of weight reached. And then hammer to remove the

pre-vulcanization in the mold placed flat vulcanizing machine. "To" tension cords by the end of each cord hanging hammer to get a certain quality. Weight can be designed as a hook or can be clamped Cord clamp, typically $50g \pm 1g$. The mold into the pressurized vulcanizing press vulcanization, is removed after the end of the hammer. " (See 5.2);

--- The "standard sample should be made a length of cord buried in a width of 6.4mm, 3.2mm thickness of the strip is made." More the words "by the specimen should be buried in a length of cord width of 6.4mm, 3.2mm thickness of the strip is made may also be Selection cord was embedded in a width of 10.0mm, 10.0mm in thickness or a width of 5mm, thickness of 3.2mm rubber compound.

However, the test results of samples with different overhang length obtained are not comparable. "(See 6.1);

--- Deleted "When the trial has not yet occurred cords out of the first break and the sample void" provisions (1991 version 11.2);

--- Added Appendix A.

Appendix A of this standard and Appendix B is an informative annex.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standards Commission Oak Common test methods Technical Committee (SAC/TC35/SC2) centralized.

This standard was drafted. Guizhou Tyre Co., Ltd., Beijing Rubber Industry Research and Design Institute.

1 Scope

This standard specifies the method for measuring tire cord fabric and vulcanized rubber static adhesion strength. This standard applies to natural fibers or person Cords made fibers.

Adhesive strength measured by this method is affected by historical conditions and cords rubber manufacturing process to a large extent, the present method Data provided can be used as the basis for judging the quality of the materials used.

This standard is also applicable to other vulcanized rubber products using a linear density of no more than 800mg/m (tex) of the cord is similar.

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 revised edition are not suitable for 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) ISO 5893 Rubber & Plastics stretching, flexing and compression testing machine (constant speed) technical performance Principle 3 the single cord out of the force required from a vulcanized rubber block evaluated by measuring the adhesive properties of rubber and fiber cord between this force is applied along the longitudinal axis of the cord, embedded in the rubber cord length is fixed (see Fig. 1).

Figure 1 Sample