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CHEMICAL INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

HG/T 4611-2014

Refined reclaimed rubber from truck tyre treads

载重轮胎胎面精细再生橡胶

(English Translation)

Issued on: July 9, 2014

Implemented on: November 1, 2014

**Issued by: Ministry of Industry and Information Technology of the
People's Republic of China**

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Foreword

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

1 Scope

This Standard specifies requirements, test methods, inspection rules, packaging, marks, transport and storage of refined reclaimed rubber from truck tire treads (hereinafter referred to as reclaimed rubber).

This Standard is applicable to refined reclaimed rubber from truck tire treads made from waste truck tire tread rubber powders.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 528 Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties

GB/T 533 Rubber, vulcanized - Determination density

GB/T 1232.1 Rubber, unvulcanized - Determinations using a shearing-disc viscometer - Part 1: Determination of Mooney viscosity

GB/T 2449 Sulfur for industrial use

GB/T 2941 Rubber - General procedures for preparing and conditioning test pieces for

physical test methods

GB/T 3185 Zinc oxide (Indirect method)

GB/T 3516-2006 Rubber - Determination of solvent extract

GB/T 4498-1997 Rubber - Determination of ash

GB/T 6038 Rubber test mixes - Preparation, mixing and vulcanization - Equipment and procedures

A.1 Sampling

Extract corresponding number of pieces in accordance with 7.1 of GB/T 13460-2008. Use a knife without lubricant to cut reclaimed rubber block of same mass from extracted rubber sheets. According to test requirements, the total mass of rubber samples shall be more than 1000 g.

It shall pay attention during cutting. the cutting direction shall be perpendicular to the largest surface of reclaimed rubber block. In addition, the surface layer shall be removed after rubber sheets are cut off.

A.2 Sample preparation

Use open rubber mixing machine which complies with GB/T 6038 to fold-roll the rubber sample that is extracted in the aforementioned method, under conditions that the roll temperature is $40^{\circ}\text{C}\pm 5^{\circ}\text{C}$, the roll space is 0.5 mm for 3 times. After sample is even mixed, take 100 g as raw rubber sample (except rubber surface particle sample). Roll the test sample to rubber sheets. Place at room temperature for 4h~24h. Prepare and determine vulcanized rubber sample in the following procedures.

- a) mix in accordance with formula in Table A.1; ingredients shall comply with provisions of corresponding product standards;
- b) use mixing roll which complies with GB/T 6038 to mix; the mixing temperature is $40^{\circ}\text{C}\pm 5^{\circ}\text{C}$;
- c) mixing procedure is shown in Table A.2;
- d) rubber mix parking is performed according to provisions of GB/T 6038;
- e) vulcanization conditions. vulcanization temperature is $145^{\circ}\text{C}\pm 1^{\circ}\text{C}$; vulcanization time is 10 min, 15 min and 20 min.