

ICS 83.060

CCS G 40



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

**GB/T 46605-2025**

---

**Rubber, vulcanized or thermoplastic - Determination of dynamic  
cutting resistance**

硫化橡胶或热塑性橡胶 动态耐切割性能的测定

**Issued on: October 31, 2025**

**Implemented on: May 1, 2026**

---

**Issued by: State Administration for Market Regulation;  
Standardization Administration of the PRC**

## Table of Contents

|                                                      |   |
|------------------------------------------------------|---|
| 1.Scope .....                                        | 1 |
| 2 Normative References .....                         | 1 |
| 3.Terms and Definitions .....                        | 1 |
| 4.Experimental Principle .....                       | 2 |
| 5.Experimental Instruments and Materials .....       | 2 |
| 6 Sample .....                                       | 3 |
| 7.Test temperature .....                             | 4 |
| 8.Test conditions .....                              | 4 |
| 9.Experimental Procedure 4 10 results indicate ..... | 5 |
| 7 References .....                                   | 9 |

## Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Petroleum and Chemical Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Rubber and Rubber Products (SAC/TC35). This document was drafted by: GATEWEL Testing Instruments (Qingdao) Co., Ltd., Guizhou Tire Co., Ltd., and Xuzhou Xulun Rubber Co., Ltd. Limited Liability Company, Qingdao Double Star Tire Industry Co., Ltd., Zhongce Rubber Group Co., Ltd., Wanli Tire Co., Ltd., Shandong Linglong Tire Co., Ltd., Triangle Tire Co., Ltd., Sailun Group Co., Ltd., Fengshen Tire Co., Ltd., Anhui Giti Passenger Radial Tire Co., Ltd., Bayi Rubber Co., Ltd., Jiangsu Top Tire Co., Ltd., Shandong Huaqin Rubber Technology Co., Ltd. Limited Liability Company, Shandong Yanggu Huatai Chemical Co., Ltd., Guangzhou Kewei Instrument Co., Ltd., Beijing Wanhui Yifang Technology Development Co., Ltd. Qingdao Taikaiying Special Tire Co., Ltd., Jiangsu Saimet Machinery Co., Ltd., and Beijing Rubber Industry Research and Design Institute Co., Ltd. The main drafters of this document are. Yu Long, Chen Yanyan, Su Juqiao, Feng Ping, Liu Lian, Sheng Jie, Guo Fei, Cao Yanchen, Li Jiahuan, Han Xiao, and Shang Weijun. Zhang Lijie, Lu Bo, Xu Qiuhan, Ni Shujie, Wang Baolin, Zhang Chao, Liu Yuwan, Di Sheng, Li Li, Hu Yong, Song Erhua, Yao Ming, Chen Ronghua, Mou Chengqian Jin Qi, Li Yunfeng, Wei Chuanduo, Xie Gengxin, He Zhenyong, Chen Yimin, Wang Chuanzhu, Wang Cheng, Jia Zhengliang, Xie Junfang, Sun

Siwen. vulcanized rubber or thermoplastic rubber Determination of dynamic cut resistance  
Warning

1. Personnel using this document should have practical experience working in a formal laboratory. This document does not cover all possible safety hazards. Problem. Users are responsible for taking appropriate safety and health measures and ensuring compliance with relevant national regulations. Warning 2

---Some steps outlined in this document may involve the use or generation of certain wastes, which may pose a hazard to the local environment. The relevant documents should specify appropriate safe operating procedures and post-use disposal provisions.

## 1 Scope

GB/T 46605-2025 is the Chinese national standard covering how well a rubber resists being cut while it is being flexed and struck - the blade and the impact energy, the specimen and its deformation during the cut, and the result, which is what governs the life of a tyre tread or a conveyor belt on sharp material. First edition, in force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

This document describes a method for determining the dynamic cut resistance of vulcanized or thermoplastic rubber using a dynamic cut resistance tester. This document applies to the determination of wear properties of vulcanized rubber or thermoplastic rubber under certain conditions when subjected to dynamic cutting by a specified tool. Yes, the test results are expressed as volumetric cutting amount and/or cutting resistance index.

## 2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 533 Determination of density of vulcanized rubber or thermoplastic rubber

GB/T 2449.1-2021 Industrial Sulfur Part

## 3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 The ability to resist wear on the material surface caused by periodic dynamic cutting.

3.2 Volume cutting loss The volume loss of the sample caused by the cutting action of a specified tool.

Note. Measurements are in cubic centimeters (cm<sup>3</sup>).

## **18 Identification Methods in Natural Rubber (NR)**

GB/T 8089 Natural raw rubber smoked sheets, white crepe sheets and light-colored crepe sheets

GB/T 8655 Styrene-butadiene rubber (SBR) 1500, 1502

GB/T 9103 Industrial Stearic Acid

GB/T 9579-2006 Identification Method of Carbon Black as a Rubber Compounding Agent in Styrene-Butadiene Rubber

GB/T 11408-2013 Dibenzothiazole disulfide (MBTS) - Vulcanization accelerator