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

GB/T 47192-2026

**Thermoplastic elastomers - Determination of volatile organic
compounds - Thermal desorption gas chromatography with
mass spectrometric detection**

热塑性弹性体 挥发性有机化合物的测定 热脱附-气相色谱-质谱法

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Foreword

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

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1. Users of 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 procedures in this document may involve the use or generation of substances that may be harmful to the local environment, or may result in waste. After use, the items should

be handled and disposed of safely in accordance with the relevant documents.

1 Scope

GB/T 47192-2026 is the Chinese national standard covering the VOCs a thermoplastic elastomer gives off - the residual monomers, oils and processing aids that come out of a soft-touch grip or a car interior part and that are what a vehicle interior air quality limit is measured against. First edition. It was issued on 27 February 2026 and has been in force since 1 September 2026, as a first edition. The document is under the responsibility of the China Petroleum and Chemical Industry Federation. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document describes the determination of volatile organic compounds in thermoplastic elastomers and their products using thermal desorption-gas chromatography-mass spectrometry (TD-GC-MS). Methods for determining the content of organic compounds. This document applies to the determination of volatile organic compounds in thermoplastic elastomers and their products.

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 15340 Sampling and Sample Preparation Methods for Natural and Synthetic Raw Rubber

GB/T 17783-2019 Preparation of chemical test samples and specimens for vulcanized or thermoplastic rubber

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Sampling was performed using Tenax TA or equivalent packing adsorption tubes, with nonpolar or weakly polar capillary columns (polarity index less than 10). Analysis revealed volatile organic compounds with retention times between n-hexane and n-hexadecane. [Source: GB/T 18883-2022, 3.4, with modifications]

4.Principles The thermoplastic elastomer sample is heated to a specified temperature and held for a period of time in a desorption tube, and volatile organic compounds are carried

by the carrier gas flow. Cold traps trap and concentrate volatile organic compounds. The cold trap is rapidly heated using a specific heating method, and the compounds are introduced into a container equipped with non-polar or... Separation was performed using a weakly polar capillary column, detection was performed using mass spectrometry, and quantification was performed using the external standard method.

5 Reagents or materials

5.1 Methanol (CAS67-56-1). chromatographic grade.