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

GB/T 33102-2025

Replacing GB/T 33102-2016

Methane

甲烷

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Standardization Administration of the PRC**

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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. This document supersedes GB/T 33102-2016 "Methane". Compared with GB/T 33102-2016, the changes are mainly structural adjustments and editorial modifications. In addition, the main technological changes are as follows:

- The scope has been changed (see Chapter 1, Chapter 1 of the.2016 edition);
- The technical requirements have been changed (see Chapter 4, Chapter 3 of the.2016 edition);
- The sampling requirements have been changed (see Chapter 5, 4.4 of the.2016 edition);
- Added requirements for exhaust gas treatment (see Chapter 6);
- The method for calculating methane purity has been changed (see 6.1, 5.1 in the.2016 edition);
- The methods for determining the content of hydrogen, oxygen, argon, nitrogen, ethane, and carbon dioxide have been revised (see 6.2, 5.2 in the.2016 edition), and a new method has been added. Method for determining carbon dioxide content (see 6.2);
- The method for determining hydrogen sulfide content has been changed (see 6.3, 5.3 in the.2016 edition);
- The method for determining moisture content has been changed (see 6.4,

1 Scope

GB/T 33102-2025 is the Chinese national standard covering methane as a bottled product - the purity grades and the impurity limits for the other hydrocarbons, oxygen, nitrogen and moisture, the analytical methods, and the packaging and marking of a flammable compressed gas. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 33102-2016.

This document specifies the technical requirements, sampling, testing rules, labeling, packaging, transportation, and storage requirements for methane, and describes the corresponding testing methods. The law was introduced, and security information was provided. This document applies to methane prepared by purification from natural gas, coke oven gas, and biomethane.

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 190 Packaging Marks for Dangerous Goods

GB/T 5099 (all parts) Seamless steel gas cylinders

GB/T 5832.1 Gas analysis - Determination of trace moisture - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 34674 and GB/T 41328 apply to this document.

4. Technical Requirements The technical requirements for methane shall comply with the provisions of Table 1.

4 Quartz crystal oscillation method

GB/T 7144 Color Marking for Gas Cylinders

GB/T 11640 Seamless Aluminum Alloy Gas Cylinders

GB/T 14194 Regulations for Filling Compressed Gas Cylinders

GB 15258 Regulations for Writing Safety Labels for Chemicals

GB/T 16804 Warning Labels for Gas Cylinders

GB/T 28054 Seamless steel gas cylinder bundling device

GB/T 28726 Gas Analysis - Helium Ionization Gas Chromatography

GB/T 28727 Gas Analysis - Determination of Trace Sulfur Compound Content in Gases by Flame Photometric Gas Chromatography

GB/T 34674 Technical Guidelines for Coke Oven Gas to Methane

GB/T 37182 Gas Analysis - Inductively Coupled Excitation Gas Chromatography GB/T 41328 Biogas

GB/T 43306 Sampling Guidelines for Gas Analysis TSG

23 Gas Cylinder Safety Technical Regulations TSGR0005 Safety Technical Supervision Regulations for Mobile Pressure Vessels