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

GB/T 46699-2025

Electronic grade tetramethylsilane

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Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part 1. Structure and Drafting Rules of Standardization Documents". Drafting is scheduled. 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 and is under the jurisdiction of the National Technical Committee on Standardization of Semiconductor Equipment and Materials (SAC/TC 203). This document was drafted by: Nanjing University Optoelectronic Semiconductor Materials Co., Ltd., Suzhou Laboratory, China Electronics Technology Standardization Institute, Jiangsu Province. Nanjing University Optoelectronic Materials Co., Ltd., Guangzhou CESI Standard Testing & Research Institute Co., Ltd., Yangtze Memory Technologies Co., Ltd., Shanghai Metrology and Testing Technology Research Institute, SMIC Integrated Circuit Manufacturing (Beijing) Co., Ltd., Luoyang Zhonggui High-Tech Co., Ltd., Qianjiao Nanda Optoelectronics Electrical Materials Co., Ltd., Ningbo Nanda Optoelectronic Materials Co., Ltd., Nanda Optoelectronic (Ulanqab) Co., Ltd., Zhejiang Zhongning Silicon Industry Co., Ltd. The company, Jinhong Gas Co., Ltd., Aishengke (Jiangsu) Chemical Technology Co., Ltd., and Nanda Optoelectronics (Zibo) Co., Ltd. The main drafters of this document are: Chen Deyi, Xu Wentao, Cao Kewei, Mao Bingrong, Shi Zeyuan, Chen Gongfeng, Zhang Ruzhi, Ma Rui, Sun Minglu, and Li Chunhua. Sun Peng, Zhang Ting, Zhao Junsha, Zhang Jian, Lu Zheng, Li Xue, Gao Zhou, Wu Yiran, Wan Ye, Hao Ping, Guo Wei, Wei Liangjie, Mao Guoyu, Wang Chen, Li Guangfeng, Liu Jianhua, Liu Liwei, Zhang Baoshuai, Sun Lili, Zhao Bin, Cao Yining, Lu Ping, Zhang Peng, Peng Yuanbing, Xu Shengxia, Liu Nengqiao, Zhou Li, Meng Qingdian, Wang Yitong, Sun Jian, Gao Peng, Zhang Jiayao, Qian Yao.

Electronic grade tetramethylsilane

1 Scope

GB/T 46699-2025 is the Chinese national standard covering TMS at semiconductor purity - the assay and the trace metals, the moisture and the particles, and the handling of a volatile flammable liquid used as a silicon and carbon source in low-k dielectric and silicon carbide deposition. First edition, one of a group of electronic grade chemical standards

issued together. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. 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 3723 General Safety Rules for Sampling of Industrial Chemical Products

GB/T 6324.8 Test methods for organic chemical products - Part

8.Determination of moisture content in liquid products - Karl Fischer coulometric method

GB/T 6680 General Rules for Sampling of Liquid Chemical Products

GB/T 11446.1 Electronic Grade Water

GB 12463 General Technical Requirements for Transport Packaging of Dangerous Goods

GB 15258 Regulations for Writing Safety Labels for Chemicals

GB 15603 General Rules for Storage of Hazardous Chemicals in Warehouses

GB/T 16483-2008 Contents and Item Order of Safety Data Sheets for Chemicals

GB/T 17519-2013 Guidelines for the Preparation of Safety Data Sheets for Chemicals

GB/T 25915.1 Cleanrooms and related controlled environments - Part

GB/T 26793 Coulometric Moisture Analyzer

GB/T 32566 Stainless Steel Welded Gas Cylinders

GB/T 37837 General Rules for Quadrupole Inductively Coupled Plasma Mass Spectrometry

SJ/T 11637 General Rules for Inductively Coupled Plasma Mass Spectrometry of Electronic Chemicals
SJ/T 11638 Test methods for particulate matter in electronic chemicals

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4. Technical Requirements Electronic grade tetramethylsilane should conform to the specifications in Table 1.