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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 14491-2025

Replacing GB/T 14491-2015

Propylene oxide for industrial use

工业用环氧丙烷

Issued on: August 1, 2025 **Implemented on: February 1, 2026**

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Standardization Administration of China

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1.Structure and drafting rules for standardization documents" Drafting. This document replaces GB/T 14491-2015 "Propylene oxide for industrial use". Compared with GB/T 14491-2015, except for the structural adjustment and In addition to the logical changes, the main technical changes are as follows:

a) The scope of application has been changed (see Chapter 1, Chapter 1 of the.2015 edition);

b) The technical requirements have been changed (see Chapter 4, Chapter 3 of the.2015 edition);

c) Added general provisions for test methods (see 5.1);

d) The test method for propylene oxide content has been changed (see 5.3, Appendix A of the.2015 edition);

e) The repeatability of the acidity test was deleted and changed to the allowable difference (see 5.5.6, B.7 of the.2015 edition);

f) The determination method of moisture content has been added to GB/T 6324.8 and serves as the arbitration method (see 5.6);

g) Added the test method for total aldehyde content and deleted the test method for acetaldehyde and propionaldehyde (see Appendix B, A.5.2 of the.2015 edition);

h) Added the test method for total chlorine content (see 5.8);

i) Added test methods for polymers (see Appendix C);

j) The inspection rules have been changed (see Chapter 6, Chapter 5 of the.2015 edition). Please note that some of the contents of this document may involve patents. The issuing

organization of this document does not assume the 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 Chemical Standardization (SAC/TC63). This document was drafted by: Ningbo Zhenhai Refining and Chemical Lyondell Chemical Co., Ltd., Wanhua Chemical Group Co., Ltd., Taixing Yida Chemical Co., Ltd., Nanjing Jinling Huntsman New Materials Co., Ltd., Tianjin Bohai Chemical Development Co., Ltd., CNOOC Shell Petrochemical Co., Ltd. Company, Binhua Group Co., Ltd., Sinopec (Beijing) Chemical Research Institute Co., Ltd., Sinopec Ningbo Zhenhai Refining and Chemical Co., Ltd., Sinochem Xuetianchen (Quanzhou) New Materials Co., Ltd., Sinopec (Tianjin) Petrochemical Co., Ltd., Sinopec Hunan Petrochemical Co., Ltd., Zibo Qixiang Tengda Chemical Co., Ltd., China Chemical Tianchen Green Energy New Materials Technology Research and Development (Zibo) Co., Ltd., Hongbaoli Group Co., Ltd. Shandong Sanyue Chemical Co., Ltd., Lihua Yiweiyuan Chemical Co., Ltd., Jiangsu Jiahong New Materials Co., Ltd., Changzhou Ruihua Chemical Industry Cheng Technology Co., Ltd., Nantong Baichuan New Materials Co., Ltd., Shandong Jinling Chemical Co., Ltd., Ningbo Zhenhai Refining and Chemical LyondellBasell Sail New Materials Co., Ltd. The main drafters of this document are. Cai Yongqi, Huang Yu, Wang Yong, Liu Zhun, Bao Miaoqing, Chen Zhongji, Mi Guiting, Yin Ping, Zhu Changjian, Luo Naixing, Ma Dianli, Song Weisheng, Tian Ping, Xu Yue, Mo Chunyang, Jiang Yuan'ai, Li Yanshan, Wei Changxin, Luo Sha, Jia Chuang, Bai Yuping, Chen Xuefei, Luo Guofei, Zhang Chunfeng, Wang Yuanping, Lü Jian, Pang Qiyu, Wang Jianquan, Zhang Fujun, Liu Xiangyun, Xu Zhigang, Huang Dongping, Ren Shunkang, Gao Meifeng, Zhou Fengjun, Wu Feike, Sun Baiya, Zhou Chengsen, Tang Jianxin. The previous versions of this document and the documents it replaces are as follows:

---First issued as GB/T 14491-1993 in.1993, first revised in.2001, second revised in.2015;

---This is the third revision. Industrial propylene oxide Warning. This document does not intend to address all safety issues related to its use. Users are responsible for taking appropriate safety and health measures. Health measures should comply with relevant national laws and regulations.

1 Scope

GB/T 14491-2025 is the Chinese national standard on propylene oxide for industrial use, in the field of chemical technology. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 1 August 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 February 2026. Classification: ICS 71.080.60, CCS G17. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the

issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the technical requirements, test methods, inspection rules, marking and accompanying documents, packaging, transportation and Storage. This document applies to ethylbenzene co-oxidation process (PO/SM), isobutane co-oxidation process (PO/T BA), cumene co-oxidation process (CHPPO), Industrial propylene oxide produced by hydrogen peroxide direct oxidation (HPPO) and chlorohydrin process.

Note. Propylene oxide molecular formula. C3H6O Structural formula. Relative molecular mass. 58.08 (according to the 2022 international relative atomic mass).

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 190 Dangerous Goods Packaging Marking

GB/T 601 Preparation of standard titration solutions for chemical reagents

GB/T 603 Preparation of preparations and products used in test methods for chemical reagents

GB/T 3143 Determination of color of liquid chemical products (Hazen unit

---platinum-cobalt color number)

GB/T 6283 Determination of water content in chemical products - Karl Fischer method (general method)

GB/T 6324.6 Test methods for organic chemical products - Part

3 Terms and Definitions

There are no terms or definitions that require definition in this document.

6 Determination of liquid color - Tristimulus colorimetry

GB/T 6324.8 Test methods for organic chemical products Part

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

GB/T 6324.9 Test methods for organic chemical products Part

9 Determination of chlorine

GB/T 6678 General Principles for Sampling of Chemical Products

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

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB/T 8170 Rules for rounding off values and expression and determination of limit values

GB/T 9722 General rules for gas chromatography of chemical reagents

GB 15258 Provisions for the Preparation of Chemical Safety Labels

GB/T 26792 High Performance Liquid Chromatography JJG342 Gel Chromatography