

ICS 75.140
CCS E 42



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

GB/T 446-2023

Fully refined paraffin wax

全精炼石蜡

Issued on: September 7, 2023

Implemented on: April 1, 2024

**Issued by: State Administration for Market Regulation;
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 replaces GB/T 446-2010 "Fully Refined Paraffin". Compared with GB/T 446-2010, except for structural adjustments and editorial changes In addition, the main technical changes are as follows:

- a) Changed the scope of application (see Chapter 1, Chapter 1 of the.2010 edition);
- b) Added product classification (see Chapter 4);
- c) Added technical requirements for No. 48 fully refined paraffin wax (I) and No. 50 fully refined paraffin wax (I) (see Table 1);
- d) Changed the technical requirements for oil content (mass fraction) of fully refined paraffin (I) (see Table 1, Table 1 of the.2010 edition);
- e) The technical requirements, test methods and arbitration methods for the color of fully refined paraffin wax (I) have been changed (see Table 1, Table 1 of the.2010 version);
- f) Changed the technical requirements for penetration of No. 60, 62, 64 and 66 fully refined paraffin (I) (see Table 1,.2010 version Table 1);
- g) Changed the test method and arbitration method for kinematic viscosity of fully refined paraffin wax (I) (see Table 1, Table 1 of the.2010 edition);
- h) The test methods for mechanical impurities and water in fully refined paraffin wax (I) have been changed (see footnote c of Table 1, footnote of Table 1 in the.2010 edition);
- i) Added technical requirements and test methods for fully refined paraffin (II) (see Table 2);
- j) Added sampling and batching (see Chapter 6);
- k) Changes in marking, packaging, transportation, storage and delivery acceptance (see Chapter 7, Chapter 5 of the.2010 edition);

l) Added Appendix A (normative) "Paraffin Stability Test Method". Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed and coordinated by the National Petroleum Products and Lubricants Standardization Technical Committee (SAC/TC280). This document was drafted by: China Petroleum & Chemical Corporation Dalian Petrochemical Research Institute, China Petroleum & Chemical Corporation, Dalian Northern Analytical Instrument Co., Ltd., Jiangsu Taier New Materials Co., Ltd., China National Petroleum Corporation Dalian Petrochemical Branch Company, China National Petroleum Corporation Fushun Petrochemical Branch, Sinopec Refining and Sales Co., Ltd., China Petroleum & Chemical Corporation Co., Ltd. Jingmen Branch, Sinopec Shanghai Gaoqiao Petrochemical Co., Ltd., Sinopec Jinan Branch, Maoming Branch of China Petroleum & Chemical Corporation. The main drafters of this document. Wang Shaojun, Yin Tonghua, Wang Shiyu, Ling Fengxiang, Zou Limei, Wang Haiyan, Lin Rongxing, Chen Hao, Cui Xiaoliang, Jiang Xiuhua, Su Shifu, Luo Huihong, Li Yi. The previous versions of this document and the documents it replaces are as follows:

1 Scope

China's national standard for fully refined paraffin wax. Paraffin wax is a petroleum product - the solid hydrocarbons separated from lubricating oil fractions - and the refining grades are distinguished by how much oil and how much aromatic and coloured material remains. Fully refined is the top grade: hydrotreated to remove the polycyclic aromatics, deoiled to a low residual content, and colourless and odourless, which is what allows it into food contact and pharmaceutical uses. Candles are the use everyone thinks of and are only part of it; the wax coats paper and board for food packaging, forms the pattern in investment casting, waterproofs matches and board, is the base of many cosmetics and the medium of paraffin therapy, and is used to encapsulate specimens for histology. The requirements accordingly turn on oil content, melting point, colour and the absence of the aromatics that make lower grades unsuitable.

This document specifies the product classification, technical requirements and test methods, sampling and batching, marking, packaging, transportation, storage and Delivery acceptance. This document applies to petroleum distillates as raw materials, obtained by physical separation and deep refining, etc., used in craft candles and electronic industries. Paraffin wax in the fields of industry, aerospace, construction and building materials, electric power industry, precision casting, coatings and other fields.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this

document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 265 Petroleum products kinematic viscosity determination method and dynamic viscosity calculation method

GB/T 2539 Determination of melting point of petroleum waxes by cooling curve method

GB/T 3554 Petroleum wax oil content determination method

GB/T 3555 Determination of Saybolt Color of Petroleum Products Saybolt Colorimeter Method

GB/T 4756 Manual sampling method for petroleum liquids

GB/T 4985 Petroleum wax penetration method

GB/T 7363 Test method for condensed ring aromatic hydrocarbons in petroleum wax

GB/T 30515 Method for determination of kinematic viscosity and calculation method of dynamic viscosity of transparent and opaque liquid petroleum products NB/SH/T 0164

Rules for packaging, storage, transportation and delivery acceptance of petroleum and related products NB/SH/T 0407

Petroleum wax water-soluble acid or alkali test method NB/SH/T 0707

Determination of benzene and toluene content in paraffin wax by headspace sampling gas chromatography method NB/SH/T 0905

Automatic tristimulus value method for determination of color of petroleum products SH/T 0229

Sampling method for solid and semi-solid petroleum products SH/T 0404

Paraffin Photostability Determination Method SH/T 0414

Petroleum wax odor test method

3 Terms and definitions

There are no terms or definitions to be defined in this document.

4 Product categories

Fully refined paraffin is based on oil content, color quality indicators and whether it has requirements for benzene content, toluene content, stability and condensed aromatic hydrocarbon technical indicators.