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

GB/T 14020-2024

Replacing GB/T 14020-2006

Hydrogenated rosin

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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 is required. This

document replaces GB/T 14020-2006 Hydrogenated Rosin. Compared with GB/T 14020-2006, except for structural adjustment and editorial changes, In addition to the modifications, the main technical changes are as follows: Added the term and definition of hydrogenated rosin (see 3.1), and deleted the term and definition of ordinary hydrogenated rosin and highly hydrogenated rosin (See

3.2 of the.2006 edition); Added the technical indicators of super highly hydrogenated rosin (see Table 1); - The Ghana colorimetry was added to the color measurement, and the glass color block colorimetry was deleted (see 6.2.1, Table 1 and

5.1.1 of the.2006 edition); - Added the gas chromatography determination method for abietic acid and dehydroabietic acid (see 6.8); - The technical indicators and determination methods of oxygen absorption have been deleted (see Table 1 and

5.7 of the.2006 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 State Forestry and Grassland Administration. This document is under the jurisdiction of the National Forest Products Technical Committee (SAC/TC 558). This document was drafted by: Forest Products Chemical Industry Research Institute of Chinese Academy of Forestry, Guangxi Wuzhou Richeng Forest Products Chemical Co., Ltd. Co., Ltd., Guangxi Dinghong Resin Co., Ltd., Guangxi Hualin Chemical Co., Ltd., and Henghe Materials Technology Co., Ltd. The main drafters of this document are. Gao Hong, Wang Hongxiao, Hou Wenbiao, Li Yuming, Lin Kezhong, Wei Rishui and Wang Bin. The previous versions of this document and the documents it replaces are as follows: First published in.1992 as GB/T 14020-1992, first revised in.2006; - This is the second revision. - Hydrogenated rosin

1 Scope

China's national standard for hydrogenated rosin - rosin whose double bonds have been saturated with hydrogen, which is done for one reason: ordinary rosin oxidises. Rosin is a natural product tapped from pine, and the abietic acids that make it up carry conjugated double bonds that react with air, darkening the material, raising its softening point and making it brittle and less soluble over time. Hydrogenation removes that reactivity, and the resulting resin keeps its colour and its properties - which is why hydrogenated rosin is the grade used in adhesives, in pressure-sensitive tapes, in chewing gum base, in printing inks and in cosmetics, wherever the product has to stay pale and stable through a shelf life. It specifies the requirements, the test methods, the inspection rules, and the marking, packaging, transport and storage of hydrogenated rosin. The requirements are the ones a formulator buys on: the colour, measured on a standard scale and the property the whole product exists to deliver; the softening point, which governs the tack and the flow of the adhesive or ink it goes into; the acid value, which is the measure of the carboxylic acid groups and determines how the resin reacts with the rest of a formulation; the degree of

hydrogenation, expressed through the residual unsaturation, which is what distinguishes this product from ordinary rosin and what determines how stable it actually is; the ash and the insoluble matter; and the behaviour on ageing. To those are added the test methods for each, and the packaging and storage provisions - which for a resin that softens and blocks in the drum in warm weather are more consequential than they look. Issued on 29 September 2024 and in force since 1 April 2025, it replaces GB/T 14020-2006.

This document specifies the technical requirements for hydrogenated rosin, describes the corresponding sampling and test methods, and specifies the inspection rules, packaging, labeling, etc. Requirements for registration, transportation and storage. This document applies to the production, trade and circulation of hydrogenated rosin.

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. in this document.

GB/T 6682 Specifications and test methods for water used in analytical laboratories GB/T 8145-2021 Gum rosin

GB/T 8146-2022 Rosin test method

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Using gum rosin as raw material, under certain temperature and pressure, using palladium/carbon and other hydrogenation catalysts, the double bonds of rosin resin acid are partially or completely An amorphous transparent solid obtained by saturating the entire surface of the gas with hydrogen.

Note. The main chemical components are dihydroresin acid and tetrahydroresin acid, with molecular formulas of $C_{20}H_{32}O_2$ and $C_{20}H_{34}O_2$.

4 Technical requirements

The technical indicators of hydrogenated rosin should meet the requirements of Table 1.
Table

1	Technical indicators of hydrogenated rosin project index	Ordinary hydrogenated rosin
	Highly hydrogenated rosin	Super highly hydrogenated rosin
	Special Grade 1, 2nd Grade	Special Grade 1, Special Grade