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

GB/T 39600-2021

**Formaldehyde emission grading for wood-based panel and
finishing products**

人造板及其制品甲醛释放量分级

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Foreword

GB/T 39600-2021 was issued on 9 March 2021 by the State Administration for Market Regulation and the National Standardization Administration, and has been in force since 1 October 2021. The /T in the designation marks it as a recommended national standard.

This is the official English translation published by openstd. SAC/TC 198 is in charge of the English translation; in case of any doubt about its contents, the Chinese original is authoritative.

The standard is drafted in accordance with GB/T 1.1-2009 Directives for standardization - Part 1: Structure and drafting of standards. It was proposed by the National Forestry and Grassland Administration and prepared by SAC/TC 198, the National Technical Committee on Wood-based Panels of the Standardization Administration of China.

1 Scope

China's national grading scheme for the formaldehyde given off by wood-based panels and by the finished products made from them. Chipboard, fibreboard, plywood, flooring, wall panelling and doors are all bonded with resins that keep releasing formaldehyde into the air of the room for years after the product is installed, and in a country that manufactures and installs them on an enormous scale that release is a public health question rather than a technical detail. GB 18580 had already set a single ceiling that every indoor panel has to clear; this standard sits on top of it and turns a pass/fail limit into three named grades, so that a manufacturer who does much better than the legal minimum has a recognised way of saying so and a buyer has a way of asking for it. The three grades - E1, E0 and ENF - are defined purely by the emission limit measured in a climate chamber, with ENF the cleanest. The document also fixes how the test pieces are cut, edge-sealed and conditioned, which

matters because the measured figure depends heavily on how much cut edge is exposed, and it states the rule by which a measured result is converted into a grade. It is used by panel and flooring mills, by furniture and door manufacturers who buy those panels, by testing laboratories, and by the retailers and specifiers who write a grade into a purchase contract.

This standard specifies requirements, test methods and determination rules for the formaldehyde emission grading.

This standard is applicable to the formaldehyde emission grading for indoor-used wood-based panels and their finishing products such as fiberboard, particleboard, plywood, blockboards and battenboards, multilaminar wood, laminated veneer lumber (LVL), glued laminated timber (glulam), decorated wood-based panels, floorings, wall panelings, and doors.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 17657-2013 Test methods of evaluating the properties of wood-based panels and surface decorated wood-based panels

GB/T 18259-2018 Terminology for wood-based panels and their surface decoration

GB 18580-2017 Indoor decorating and refurbishing materials - Limit of formaldehyde emission of wood-based panels and finishing products

3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 18259-2018 apply.

4 Requirements for formaldehyde emission grading

Formaldehyde emission for indoor-used wood-based panels and their finishing products are graded into 3 grades according to the emission limit. The requirements shall conform to Table 1.

Table 1 gives the three grades in milligrams per cubic metre. Grade E1 carries an emission limit of not more than 0.124 and is marked E1; the limit and the mark for E1 are those specified in GB 18580-2017. Grade E0 carries an emission limit of not more than 0.050 and is marked E0. Grade ENF carries an emission limit of not more than 0.025 and is marked ENF.