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

GB 18586-2026

Replacing GB 18587-2001

**Indoor decorating and refurbishing materials - Limits of harmful
substances in carpets, carpet underlays and polyvinyl chloride
flooring**

室内装饰装修材料 地毯、地毯衬垫和聚氯乙烯地板中有害物质限量

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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 18587-2001 "Limits for the Emission of Hazardous Substances from Carpets, Carpet Backings and Carpet Adhesives in Interior Decoration and Renovation Materials". The limits of hazardous substances in PVC roll flooring for interior decoration and renovation materials are consistent with GB 18586-2001 and GB 18587-2001. Compared with GB 18586-2001, apart from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The scope of application has been changed (see Chapter 1 of GB 18587-2001 and GB 18586-2001);
- b) Added "carpet", "carpet padding", "environmental test chamber", "sample loading coefficient", "release amount per specific area", and "total volatile organic compounds". The terms and definitions for "compound" and "polyvinyl chloride flooring" are revised (see Chapter 3), and the phrase "material/cabin load ratio" (see GB 18587-) has been removed. Chapter 3 of 2001);
- c) The limits for soluble heavy metals and volatile substances have been removed (see Chapter 3 of GB 18586-2001);
- d) The requirement for Class B limits on the release of hazardous substances from carpets and carpet backings has been removed; the distinction between environmentally friendly and general products has been eliminated; the requirement for Class B limits on the release of hazardous substances from carpets and carpet backings has been removed. Limits for adhesives used in carpet installation (see Chapter 4 of GB 18587-2001);

e) The limits for total volatile organic compounds (TVOC) in carpet padding have been changed (see 4.1.2, Chapter 4 of GB 18587-2001);

f) The labeling information (see

4.2 of GB 18587-2001) has been removed, and the total volatile organic compound (TVOC) emission rate and weight have been added. The seven items are: metal content, total phthalate content, formaldehyde release, formamide content, polybrominated biphenyl content, and polybrominated diphenyl ether content. Limited quantity requirements (see 4.2);

g) Sampling has been removed (see Chapter 4 of GB 18586-2001);

h) The test method has been changed (see Chapter 5, GB 18587-2001), and the test method for vinyl chloride monomer content has been changed. The method increases the release rate of total volatile organic compounds (TVOC), heavy metal content, total phthalates, and formaldehyde release. Test methods for the content of formamide, polybrominated biphenyls (PBBs), and polybrominated diphenyl ethers (PBDEs) (see 5.2, GB 18586-2001).

i) The inspection rules have been deleted (see Chapter 6 of GB 18587-2001 and GB 18586-2001). 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 Ministry of Industry and Information Technology of the People's Republic of China. The release history of this document and the document it replaces is as follows:

---First released in 2001 as GB 18587-2001 and GB 18586-2001.

---This is the first revision. Interior decoration and renovation materials. carpets, carpet backings and Limits of hazardous substances in polyvinyl chloride flooring

1 Scope

GB 18586-2026 is the Chinese national standard covering what may come out of a floor covering into the air of a room - the volatile organic compounds, the formaldehyde, the plasticisers and the heavy metals from carpets, underlays and vinyl flooring. A mandatory standard. It merges and replaces GB 18587-2001, and takes effect on 1 October 2027. Issued on 31 March 2026, it takes effect on 1 October 2027, replacing GB 18587-2001.

This document specifies the limits for the release of hazardous substances from carpets, carpet backings, and PVC flooring, and describes the corresponding test methods. This document applies to carpets, carpet underlays, and PVC flooring.

4.1 Limits on the release of hazardous substances from carpets and carpet backing

4.1.1 The limits for the release of hazardous substances from carpets shall comply with the provisions of Table 1.

4.1.2 The limits for the release of hazardous substances from carpet padding shall comply with the provisions of Table 2.

4.2 Requirements for the Limitation of Hazardous Substances in Polyvinyl Chloride Flooring
The limits for hazardous substances in PVC flooring shall comply with the provisions of Table 3.

5 Test Methods

5.1 Testing of the limits for the release of hazardous substances from carpets and carpet backing

5.1.1 Sampling, transportation, storage and preparation of samples Newly manufactured or unused carpets and carpet underlays shall comply with the provisions of GB/T 35457.

5.1.2 Sample Pretreatment The prepared samples were placed in the environmental test chamber for equilibration for (24 ± 0.5) h. Before placing the samples in the environmental test chamber, samples were collected in the test chamber according to 5.1.3. Blank gas is used for blank tests. The test conditions in the environmental test chamber are as follows:

a) Temperature. $(23 \pm 1.0)^{\circ}\text{C}$;

b) Relative humidity. $(50 \pm 3.0)\%$;

c) Air exchange rate. $(1.0 \pm 0.05)/\text{h}$;

d) Air velocity.

0.1 m/s ~

0.3 m/s;

e) Background concentrations of TVOC $\leq 50 \mu\text{g}/\text{m}^3$, formaldehyde $\leq 6 \mu\text{g}/\text{m}^3$, and any VOC monomer $\leq 5 \mu\text{g}/\text{m}^3$;

f) Sample loading coefficient. $(0.4 \pm 0.05) \text{ m}^2/\text{m}^3$;

g) The sample is placed horizontally at the bottom center of the environmental test chamber to ensure that the airflow is evenly distributed on the release surface of the sample. To determine the release amount from the surface of carpet and carpet backing samples separately, the bottom of the carpet and carpet backing needs to be placed in a non-standardized environment. On a movable stainless steel plate. Seal with non-releasable/non-absorbent aluminum foil (check before use) or a stainless steel frame. edge.

5.1.3 Gas Collection Sampling of styrene, 4-phenylcyclohexene, butylated hydroxytoluene,

and TVOC was performed according to ISO 16000-6, with a sampling flow rate of 100mL/min~200mL/min, collection volume is 3L~5L. Formaldehyde sampling shall be performed in accordance with ISO 16000-3, with a sampling flow rate of 500 mL/min to 800 mL/min and a sampling volume of 12 L. 30L. During non-standard atmospheric pressure environment testing, the gas sampling volume is corrected to the volume under standard atmospheric pressure (23°C, 101.3kPa).

5.1.4 Gas Analysis The analysis of styrene, 4-phenylcyclohexene, butylated hydroxytoluene, and TVOC in gaseous samples was performed according to ISO 16000-

5.2 Testing of Hazardous Substance Limits in Polyvinyl Chloride Flooring

5.2.1 Sampling All test specimens used in the test should be cut at least 50 mm from the edge of the specimen.

5.2.2 Vinyl chloride monomer content Proceed according to GB/T 4615.

5.2.3 Total Volatile Organic Compounds (TVOC) Emissions

5.2.3.1 Sample Preparation Only the exposed surface of the sample is tested. The bottom and edges of the sample are sealed with aluminum foil-like sealing material or a sealing frame that releases no organic matter. For plate-shaped samples... The bottom can be arranged back-to-back. The area of the exposed surface of the sample is 1m², and it can be divided into two or more pieces depending on the actual situation of the sample.

5.2.3.2 Test conditions of the environmental test chamber Test conditions in the environmental test chamber.

- a) Effective volume. (1±1%) m³;
- b) Temperature. (23.0±1.0)°C;
- c) Relative humidity. (50.0±3.0)%;
- d) Air exchange rate. (1.0±0.05)/h;
- e) Sample loading coefficient. (1.0±0.05) m²/m³;
- f) Test period. (72±1)h. Other procedures shall be carried out in accordance with the provisions of Chapter 7 of GB/T 29899-2024.

5.2.3.3 Calculation and Representation of Results The calculation is performed according to the area release rate specified in

8.3 of GB/T 29899-2024.

5.2.4 Heavy metal content Heavy metals lead and cadmium shall be tested according to GB/T 39560.5; hexavalent chromium shall be tested according to GB/T 39560.702; mercury shall be tested according to... It shall be carried out in accordance with the provisions of