



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

GB 18582-2020

Limit of harmful substances of architectural wall coatings

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Foreword

All technical contents of this standard are mandatory.

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB 18582-2008 "Indoor decorating and refurbishing materials - Limit of harmful substances of interior architectural coatings" and GB 24408-2009 "Limit of harmful substances of exterior wall coatings". This standard is mainly based on GB 18582-2008 and integrates the contents of GB 24408-2009. Compared with GB 18582-2008, in addition to editorial changes, the main technical changes are as follows.

- MODIFY the scope of the standard (see Chapter 1; Chapter 1 of GB 18582-2008);
- DELETE the normative references "GB/T 601, GB/T 1250"; CHANGE "GB/T 3186-2006" to "GB/T 3186"; CHANGE "GB/T 6682" to "GB/T 6682-2008"; ADD normative references "GB/T 1725-2007, GB/T 8170-2008, GB15258, GB/T 23985-2009, GB/T 23986-2009, GB/T 23990-2009, GB/T 23991-2009, GB/T 23992-2009, GB/T 23993-2009, GB/T 30647-2014, GB/T 31414-2015 "(see Chapter 2; Chapter 2 of GB 18582-2008);

- ADD the terms and definitions of "building", "architectural wall coating", "decorative panel coating", "effect pigment" and "application condition" (see Chapter 3);
- MODIFY the definition of "volatile organic compound " and "volatile organic compound content " (see Chapter 3; Chapter 3 of GB 18582-2008);
- ADD the product classification (see Chapter 4);
- CHANGE the "water-based wall coating" to "internal wall coating", "water-based wall putty" to "putty", "free formaldehyde" to "formaldehyde content", "sum of benzene, toluene, ethylbenzene and xylene" to "total content of benzene series"; MODIFY the indexes of "VOC content", "formaldehyde content", "total content of benzene series"; DELETE the item and index of "lead Pb" in "soluble heavy metals"; ADD the item and index of "total Lead (Pb) content" and "total content of alkylphenol polyoxyethylene ether" (see Table 1; Table 1 of GB 18582-2008);
- ADD the "exterior wall coating" and its items and indicators (see Table 1);
- ADD the "decorative panel coating" and its items and indicators (see 5.2);
- MODIFY the test methods for the items "VOC content", "formaldehyde content", "total content of benzene series", "soluble heavy metal content" (see 6.2; 5.2 of GB 18582-2008);
- ADD the test methods for the items "total lead (Pb) content", "total content of alkylphenol polyoxyethylene ethers", "total content of glycol ethers and ether esters", "total content of halogenated hydrocarbons" (see 6.2);
- MODIFY the content of the test result judgment (see 7.2; 6.2 of GB 18582-2008);
- MODIFY the contents of the packaging mark (see Chapter 8; Chapter 18 of GB 18582-2008);
- DELETE the coating safety and protection (see Chapter 8 of GB 18582-2008);

- ADD the implementation of standards (see Chapter 9).

This standard was proposed by and shall be under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China.

This standard replaces the standard previously issued as follows.

- GB 18582-2001, GB 18582-2008;
- GB 24408-2009.

Limit of harmful substances of architectural wall coatings

1 Scope

This standard stipulates the product classification, requirements, test methods, inspection rules, packaging marks, standard implementation related to the allowable limits of substances harmful to humans and the environment in architectural wall coatings.

This standard is applicable to all kinds of architectural wall coatings that are directly painted on site and factory-applied to decorate and protect the inner and outer surfaces of buildings based on cement-based and other non-metallic materials (except wood materials).

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB/T 1725-2007 Paints, varnishes and plastics - Determination of non-volatile-matter content

GB/T 3186 Paints varnishes and raw materials for paints and varnishes - Sampling

GB/T 6682-2008 Water for analytical laboratory use - Specification and test

methods

GB/T 6750-2007 Paints and varnishes - Determination of density -

Pycnometer method

GB/T 8170-2008 Rules of rounding off for numerical values & expression
and judgement of limiting values

GB/T 9750 Marks for package of coating products

GB 15258 General rules for preparation of precautionary label for chemicals

GB/T 23985-2009 Paints and varnishes - Determination of volatile organic
compound (VOC) content - Difference method

GB/T 23986-2009 Paints and varnishes - Determination of volatile organic
compound (VOC) content - Gas-chromatographic method

GB/T 23990-2009 Determination of the contents of benzene toluene
ethylbenzene and xylene in coatings by gas chromatography

GB/T 23991-2009 Determination of soluble harmful elements content of
coatings

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Building

Spaces and entities constructed with building materials, which are used for
people to live and perform various activities.

[GB/T 50504-2009, definition 2.1.4]

Note. For example, residential building, office buildings, factories, warehouses,
shopping malls, stadiums, exhibition halls, libraries, hospitals, schools, airports, bus
stations, theaters, churches, etc.

3.2

Architectural wall coatings

Wall coating applied to the inner and outer surfaces of buildings based on