



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

GB 38469-2019

Limit of harmful substances of marine coatings

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1 Scope

This Standard specifies the terms and definitions, product classification, requirements, test methods, inspection rules, packaging marks of limit for harmful substances to human and environment of marine coatings.

This Standard is applicable to various marine coatings for ships of which steel, light alloy and fiberglass are used as the main materials of the hull.

This Standard is not applicable to fireproof coating for ships.

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 3186, Paints varnishes and raw materials for paints and varnishes -Sampling

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 24408-2009, Limit of harmful substances of exterior wall coatings

GB/T 25011-2010, Test method and determination for DDT content of marine antifouling paints

GB/T 26085-2010, Test method and determination of total tin in antifouling paints for ship

GB 30981-2014, Limit of harmful substances of anticorrosion coatings for construction steel structure

GB/T 33395-2016, Determination of asbestos in coatings

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 ship; vessel

A structure capable of navigating and anchoring in waters, engaged in carrying, battle fight, operation, scientific research and so on.

[GB/T 7727.1-2008, definition 2.1]

3.2 steel ship

A ship that uses steel as the main material of hull structure.

[GB/T 7727.1-2008, definition 9.1]

3.3 marine coatings

A general name for all kinds of paints that are coated on various parts of the ship to prevent seawater, marine atmospheric corrosion and marine organisms from adhering to and meet the special requirements of ships.

[GB 12900-1991, definition 2.4.2]

3.4 volatile organic compound; VOC

Any organic liquid and/or solid that can evaporate naturally under the normal temperature and pressure of the atmospheric environment.

[GB/T 5206-2015, definition 2.270]

3.5 volatile organic compound content

VOC content The mass of the volatile organic compound present in the paint measured under specified conditions.

[GB/T 5206-2015, definition 2.271]

3.6 anti-fouling paint

A type of coating that is applied to the underwater part of the hull or other underwater

structures to prevent biological growth.

[GB/T 5206-2015, definition 2.19]

3.7 biocide

7 Inspection rules

7.1 Type inspection items

7.1.1 All requirements listed in this Standard are type inspection items. Under normal production conditions, type inspection shall be carried out at least once every two years

7.1.2 Usually, the type inspection should be conducted in one of the following cases:

- trial model identification for new product;
- product is manufactured in another place;
- great changes in production formula, process, source of key raw materials and product construction ratio;
- production resumed after discontinued production of three months.

7.2 Determination of inspection results

7.2.1 The determination of inspection results is carried out according to the rounding value comparison method in GB/T 8170-2008. When the inspection result is 0, 0.0, 0.00, 0.000 after rounding-off, the result is reported in one significant digit.

7.2.2 When reporting the test results, the group allocation ratio and dilution ratio shall be indicated at the same time.

7.2.3 When the inspection results of all items meet the requirements of this Standard, the product meets the requirements of this Standard.

8 Packaging marks

8.1 In addition to the product packaging marks shall comply with the provisions of GB/T 9750, products that pass the inspection according to this Standard can be clearly indicated on the packaging mark.

8.2 For coating products consisting of two or more components, the proportion of each component shall be clear on the packaging mark or in the product manual. For coatings that need to be diluted during construction, the dilution ratio shall be specified on the packaging mark or in the product manual.