

ICS 77.140.50

CCS H46



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

GB/T 12754-2019

Replacing GB/T 12754-2006

Prepainted steel sheet and strip

彩色涂层钢板及钢带

Issued on: March 25, 2019

Implemented on: February 1, 2020

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

1 Scope	
2 Normative references	
3 Terms and definitions	
4 Grade representation method, classification and	
4.2 Classification and code	
5 Ordering content	
6 Dimensions, shape, weight	
7 Technical requirements	
7.1 Common coated sheets	
7.1.1 Steel substrate of pre-painted steel sheets	
7.1.2 Performances of top-side coating	
7.1.2.1 Coating types	
7.2.6 Frosted sheet	
8 Test methods	
9 Inspection rules	
10 Packaging, marking and quality certificate	
11 Description of corrosivity of use environment of pre-painted steel sheets	
12 Selection of pre-painted steel sheets...	
13 Storage, transportation and handling of pre-painted steel sheets...	
14 Processing of pre-painted steel sheets...	
15 Life to the first major maintenance and durability of pre-painted steel sheets ...	

1 Scope

GB/T 12754-2019 is the Chinese national standard on prepainted steel sheet and strip, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 25 March 2019 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 February 2020. Classification: ICS 77.140.50, CCS H46. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in

the document itself, which is delivered complete in English translation.

This Standard specifies terms and definitions, grade representation method, classification and code, order content, dimensions, shape, weight, technical requirements, test methods, inspection rules, packaging, marking and quality certificates of pre-painted steel sheets and strips. This Standard applies to pre-painted steel sheets and strips for building interior and exterior applications (hereinafter referred to as pre-painted steel sheets). Pre-painted steel sheets for home appliances and other purposes may also refer to this Standard.

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 247 General rule of package, mark and certification for steel plates (sheets) and strips

GB/T 1766-2008 Paints and varnishes - Rating schemes of degradation of coats

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

GB/T 13448 Test methods for pre-painted steel sheet

GB/T 17505 Steel and steel products - General technical delivery requirements

3 Terms and definitions

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

3.1 pre-painted steel sheet Product obtained by continuously applying an organic painting on a surface- pretreated steel substrate and then baking and curing.

3.2 steel substrate Steel strip used to apply painting.

3.3 top side A side with higher requirements for color, coating properties, surface quality, etc. on both sides of pre-painted steel sheets.

3.4 bottom side The other side that is opposite to the top side of pre-painted steel sheets.

3.5 building exterior applications Applications that are affected by the external atmospheric environment.

3.6 building interior applications Applications that are affected by the internal atmosphere.

4 Grade representation method, classification and

4.1 Grade representation method The grade of pre-painted steel sheets consists of the

uppercase English letter T plus the grade of steel substrate.

5 Ordering content

5.1 Contracts or orders ordered in accordance with this Standard shall include the following.

5.2 If the dimensional and flatness precision is not indicated in the order contract, the supply party shall supply the product according to the normal precision.

6 Dimensions, shape, weight

6.1 The nominal dimension range of pre-painted steel sheets is shown in Table

2.The nominal thickness of pre-painted steel sheets is the nominal thickness of the steel substrate before pre-painting, excluding the coating thickness.

6.2 The tolerance of width, length, shape and steel substrate thickness of pre- painted steel sheets shall comply with the requirements of the corresponding steel substrate standards.

6.3 Pre-painted steel sheets are delivered according to actual weight.

7.1.2.1 Coating types

7.1.2.2 Thickness of top-side coating 7.1.2.2.1 The thickness of top-side coating is the sum of the thicknesses of all coatings on the top side.

7.1.2.3 Color difference of coating 7.1.2.3.1 The color difference DeltaE between the coating and the standard swatch shall not be more than 1.5.The standard swatch shall be confirmed by both the supply and demand parties at the time of ordering. 7.1.2.3.2 The requirements for color difference of metallic pigment coatings shall be negotiated at the time of ordering.

7.1.2.4 Coating gloss 7.1.2.4.1 60° mirror gloss is used for the coating gloss. The gloss is divided into three grades. A, B and C. The gloss of each level shall meet the requirements of Table 3.

7.1.2.5 Coating hardness 7.1.2.5.1 The coating hardness is usually evaluated by the pencil hardness test. If tests such as abrasion resistance and scratch resistance are required for further evaluation, it shall be negotiated at the time of ordering.

7.1.2.8 UV lamp accelerated weathering performance 7.1.2.8.1 The UV lamp accelerated weathering performance of pre-painted steel sheets is divided into 4 grades. grades 1 ~

4.The requirements for test time, discoloration and loss of light of each grade shall comply with the requirements of Table

7.If there are special requirements for the test time, it shall be negotiated at the time of

ordering. 7.1.2.8.2 Within the time specified in Table 7, the specimen shall be free from blistering and cracking, and the powdering shall not exceed grade 1 specified in Table 23 of GB/T 1766-2008. The loss of light and discoloration of the specimen shall be evaluated according to Table 4 and Table 5 of GB/T 1766- 2008, respectively, and the grade shall comply with the requirements of Table 7.

7.2.6 Frosted sheet

7.2.6.1 The frosted sheet is a pre-painted steel sheet of which the steel substrate is applied with a coating containing frosted particles.

7.2.6.2 The requirements for color difference and neutral salt spray resistance of frosted sheets shall be negotiated at the time of ordering. The remaining technical requirements shall comply with the requirements of 7.1.1, 7.1.2,

7.1.3 and 7.1.4.

8 Test methods

The test methods for each batch of pre-painted steel sheets shall comply with the requirements of Table 8.

9 Inspection rules

9.1 The inspection and acceptance of pre-painted steel sheets shall be carried out by the supply party's inspection department.

9.2 Pre-painted steel sheets shall be inspected in batches. Each batch shall consist of pre-painted steel sheets of not more than 30 t, with the same grade, the same specification, the same coating weight, and the same coating surface condition, topcoat type, topcoat function, coating structure and color.

9.4 The sampling quantity and sampling position of pre-painted steel sheets shall comply with the requirements of Table 8.

9.5 The re-inspection and determination rules of pre-painted steel sheets shall comply with the provisions of GB/T 17505.

10 Packaging, marking and quality certificate

The packaging, marking and quality certificate of pre-painted steel sheets shall comply with the provisions of GB/T 247. In addition, the marking shall also include the contents such as plating weight of steel substrate, topcoat type and color.