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

GB/T 12755-2008

Replacing GB/T 12755-1991

Profiled steel sheet for building

建筑用压型钢板

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1 Scope

GB/T 12755-2008 is the Chinese national standard on profiled steel sheet for building, 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 6 December 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 October 2009. 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 the classification, code, plate profile and structure requirements, cross- section shape and size, technical requirements, quality inspection and tolerance, packaging, marking and quality certificate of various profiled steel sheet for building. This Standard is applicable to roll-forming profiled steel sheet for building on the continuous-

mode unit, including various shaping plate used for all parts of roof, wall face and floor cover.

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. For dated reference, subsequent amendments (excluding content of corrigenda) to, or revisions of, any of these publications do not apply. However, Parties to agreements based on this Code are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. For undated references, the latest edition of the normative document referred to applies.

GB/T 708 Dimension Shape Weight and Tolerance for Cold-rolled Steel Plates and Sheets

GB/T 709 Dimension, Shape, Weight and Tolerances for Hot-rolled Steel Plates and Sheets

GB/T 17661995 Paint and Varnish-Rating Schemes of Degradation of Coats

GB/T 1839 Test Method for Gravimetric Determination of Mass per Unit Area of Galvanized Coatings Steel Products (GB/T 18392003, ISO 1460; 1992, MOD)

GB/T 2518 Continuously Hot-dip Zinc-coated Steel Sheet and Strip CB/T 12754 Prepainted Steel Sheet CB/T 13448 Test Method for Prepainted Steel Sheet

GB/T 14978 Continuously Hot-dip Aluminum-Zinc Alloy Coated Steel Sheet and Strip

GB 50018 Technical Code of Cold-formed Thin-wall Steel Structures

GB 50205 Code for Acceptance of Construction Quality of Steel Structures

3 Ordering Content

Contract or order ordering in accordance with this Standard shall include the following contents:

- a) The standard number;
- b) Product name and classification;
- c) Plating plate grades, hot-dip coating variety (zinc, aluminum, zinc, zinc-aluminum, and zinc-iron), coating weight, and plate thickness, material and performance requirements;
- d) Color-coating structure, coating thickness and coating surface condition;
- e) Finish coat variety and color;
- f) Manner of packing;
- g) Specification (product model, thickness and length);
- i) Other additional requirements.

4 Terms and Definitions

The following terms and definitions are applicable to this Standard.

4.1 Profiled steel sheet The stamped plate formed by rolling and cold bending the coated sheet or plating plate along the plate width direction, and so as to form waveform section.

4.2 Profiled steel sheet for building Independently used profiled steel sheet for building fender structure (roof and wall face) and composite floor cover.

4.3 Base steel sheet Various sheet steel or steel strips for making plating plate.

4.4 Steel substrate (plating plate) Sheet steel or steel strip with surface coating, including hot-galvanized plate, hot-dip galvanized aluminum zinc alloy plate, hot-galvanized aluminum alloy plate.

4.5 Prepainted steel sheet The steel plate products continuously covered on organic coatings (at least two layers on the top side) on the surface processed steel substrate (plating plate), and then, baking, solidifying so as to form coating (colored prepainted sheet).

4.6 Top side The upper surface of the plating plate and prepainted steel sheet or the external surface of the profiled steel sheet.

4.7 Bottom side The lower surface of the plating plate and prepainted steel sheet or the internal surface of the

8.1.2 The developed width of the profiled steel sheet (steel substrate's width) should comply with the requirements of the basic size of 600mm, 1000mm or 1200mm series. Commonly-used width is preferably 1000mm.

8.2 Steel substrate and prepainted steel sheet

8.2.1 The steel substrate and prepainted steel sheet may all directly be shaped by rolling to form profiled steel sheet. The chemical compositions and mechanical properties of the hot-galvanizing steel substrate and hot-dipped aluminium-zinc steel substrate shall comply with the requirements of Appendix A.

8.2.2 According to the yield strength grades, the substrate steels should adopt grade 250 (MPa) and grade 350(MPa) steels. The parameters such as design value of strength may be valued according to the requirements of GB 50018. When backed up by technical economy, higher- strength steels can be adopted for steel substrate of the profiled steel sheet.

8.2.3 In engineering, the nominal thickness of the wall profiled steel sheet substrate should not be less than 0.5mm, while that of the roofing profiled steel sheet substrate should not be less than 0.6mm, and that of the floor system profiled steel sheet substrate should not

be less than 0.8mm. The steel substrate thickness (including coating thickness) tolerance shall comply with the requirements of Appendix B, while the plates whose minus deviation exceed those specified in Appendix B shall not be used for processing the profiled steel sheet.

8.2.4 Steel substrate coating (zinc, zinc-aluminium, and aluminium-zinc alloy coating) shall adopt hot dipping method; the coating weight shall be ensured as the delivery item according to the purchaser's requirement and shall be indicated in the purchase contract. If no other requirements asked by the purchaser, cladding weight (both sides) shall not be less than 90/90g/m² (Hot dip galvanizing steel substrate), 50/50g/m² (Aluminium-zinc alloy coating alloy steel substrate) 65/65g/m² (galvanized aluminium steel substrate). The recommended coating weight for different corrosion media may refer to Appendix C, and the classification of environmental corrosive conditions may refer to Appendix D.

8.3 Prepainted steel sheet

8.3.1 The coating type, performance, quality and other technical requirements and inspection methods of the prepainted steel sheet for profiled steel sheet shall comply with the requirements of GB/T 12754. The grades, function, classification and code of the colored pre-painted steel sheet may see Appendix E, and the cladding, coating and durability test shall comply with the requirements of Appendix C.

8.3.2 Coating type and coating structure of the prepainted steel sheet for the profiled steel sheet shall be ensured as the delivery condition of the purchaser and shall be agreed and indicated in the purchase contract. If no other requirements asked by the purchaser, coating structure may be delivered according to the method of two layers on the top side and one layer on the bottom side.

8.4 Others

8.4.1 The profiled steel sheet for building shall not adopt electro-galvanizing steel plate or steel plate (strip) without any cladding and coating.

8.4.2 The profiled steel sheet for composite floor system shall adopt hot-galvanizing steel plate.

8.4.3 When the lower plate of the composite roofing profiled steel sheet is perforated acoustic board, the pore diameter and row pitch of the profiled steel sheet shall be specially designed.

8.4.4 The same roofing engineering or wall engineering's profiled steel sheet should adopt the prepainted steel sheet with the same batch number for the order and the delivery, so as to avoid color difference.