

Specification for

Hot-dip zinc coated and hot-dip aluminium/zinc coated corrugated steel sheets for general purposes

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- British Railways Board
- British Steel Industry
- Cold Rolled Sections Association
- Institution of Production Engineers
- Society of Motor Manufacturers and Traders Ltd.

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- British Welded Steel Tube Association
- Coated Metals Ltd.
- Electricity Supply Industry in England and Wales
- International Tin Research Institute
- Lead Development Association
- Metal Roof Deck Association
- National Association of Steel Stockholders
- Paintmakers Association of Great Britain Ltd.
- Zinc Development Association

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Foreword

This British Standard has been prepared under the direction of the Iron and Steel Standards Committee and is a revision of BS 3083:1980, which is withdrawn.

In this revision an aluminium/zinc coating (nominally 55 % aluminium) has been added. The zinc coated products specified in earlier editions of BS 3083 have however been retained and no changes have been made to dimensional requirements.

It should be noted that bi-metallic corrosion may occur if aluminium/zinc coated surfaces are allowed to come in contact with lead or copper. Run off water from copper pipes may also cause corrosion of the aluminium/zinc coated surface.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies the requirements for materials, profiles and dimensions of hot-dip zinc coated and hot-dip aluminium/zinc coated corrugated steel sheets for general purposes.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Designation

The designation shall consist of the following items in the order given:

- a) the number of this British Standard, i.e. BS 3083;
- b) the number of corrugations (see Table 2);
- c) the coating designation (see Table 1), where “Z” indicates zinc coating, “AZ” indicates aluminium/zinc coating, and the number denotes the coating mass (e.g. 350 denotes 350 g/m² total including both surfaces).

Example of designation: BS 3083 10/3 Z 350.

3 General

Hot-dip zinc and aluminium/zinc coated corrugated steel sheets shall comply with clause 5 to clause 12. Where any of the options given in Appendix A are called up at the time of the enquiry and order, the corrugated steel sheets shall, instead of or in addition to the basic specification, comply with the requirements of such options.

4 Information to be supplied by the purchaser

4.1 General

The following information shall be supplied by the purchaser at the time of the enquiry and order:

- a) the complete designation as covered by clause 2;
- b) the required dimensions;
- c) the quantity required and handling requirements.

4.2 Options

A number of options are specified in Appendix A. In the event that the purchaser does not indicate his wish to implement any of these options and specify his requirements at the time of enquiry and order, the manufacturer shall supply in accordance with the basic specification.

5 Steel base

The steel base of the products shall be a grade for which it can be assumed for design purposes that the yield strength will not be less than 220 N/mm².

See also option A.1.

6 Surface protection

The products shall be supplied chemically passivated.

See also option A.2.

NOTE 1 Chemical passivation is carried out after coating to protect the surface against humidity and to reduce the risk of formation of wet storage stain (“white rust” in the case of zinc coated products, “black rust” in the case of aluminium/zinc coated products). However, the inhibiting characteristics are limited, and if packs of sheets are received wet or become wet in storage, it is important that the sheets are immediately separated.

NOTE 2 Chemical passivation may cause slight discoloration of the surface that is not detrimental to the general performance of the product.

NOTE 3 If untreated products are specified, the manufacturer is not responsible for the formation of storage stain.

7 Oiling: aluminium/zinc coated products

Aluminium/zinc coated products shall be supplied on the basis that the presence of residual oil from processing is permitted.

See also option A.3.

8 Supply condition

The products shall be supplied not curved.

See also option A.4.

9 Coating

9.1 Coating mass

The minimum value of the coating mass shall be as given in Table 1 for the single and triple spot test when tested as described in 9.2 and 9.3.

9.2 Test lot

A test lot shall consist of 50 t, or fraction thereof, of the same steel grade, coating type, coating mass, nominal thickness and number of corrugations.

9.3 Test method

9.3.1 Sampling. Three measurements shall be taken from one sheet in each test lot, one from the centre and one from each edge of the product at least 50 mm from the edge.

9.3.2 Triple spot test. The triple spot test shall be determined as the average coating mass of the measurements as specified in 9.3.1.

9.3.3 Single spot test. The single spot test shall be the lowest coating mass result of any one of the measurements determined for the triple spot test.

NOTE See Appendix B for details of the referee method to be used in cases of dispute.