

Specification for

Sprayed metal coatings —

**Part 2: Protection of iron and steel
against corrosion and oxidation at
elevated temperatures**

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Co-operating organizations

The Surface Coatings (other than Paints) Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- Aluminium Federation*
- Assay Offices Committee of Great Britain
- Association of British Chemical Manufacturers
- Association of Metal Sprayers*
- British Bolt, Nut, Screw and Rivet Federation
- British Cycle and Motor Cycle Industries Association Limited
- British Electrical and Allied Manufacturers' Association
- British Iron and Steel Federation*
- British Jewellers' Association
- British Non-ferrous Metals Research Association*
- Electronic Engineering Association
- Engineering Equipment Users' Association
- Greater London Council
- Institute of Metal Finishing*
- Institute of Sheet Metal Engineers
- Institute of Vitreous Enamellers
- Metal Finishing Association
- Ministry of Aviation*
- Ministry of Defence, Army Department*
- Ministry of Defence, Navy Department*
- Society of Motor Manufacturers and Traders Limited*
- Tin Research Institute
- Vitreous Enamel Development Council
- Zinc Development Association*

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committees entrusted with the preparation of this British Standard:

- British Constructional Steelwork Association
- British Grit Association
- British Railways Board
- Electricity Council, the Generating Board and the Area Boards in England and Wales
- Institute of Welding
- Institution of Civil Engineers
- Institution of Structural Engineers
- London Transport Board
- Research Association of British Paint, Colour and Varnish Manufacturers
- Scientific Instrument Manufacturers' Association
- Shipbuilding Employers Federation
- Individual firms

This British Standard, having been approved by the Surface Coatings (other than Paints) Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council on 12 August 1965

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Committee references SRE/6, SRE/6/2
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Foreword

This standard makes reference to the following British Standards:

BS 245, *White spirit*.

BS 427, *Method for Vickers hardness test*.

BS 479, *Coal-tar naphthas*.

BS 1475, *Wrought aluminium and aluminium alloys for general engineering purposes. Wire*.

BS 2451, *Chilled iron shot and grit*.

BS 2569, *Sprayed metal coatings — Part 1: Protection of iron and steel by aluminium and zinc against atmospheric corrosion*.

Sprayed metal coatings are produced industrially by melting the coating metal in a stream of hot gas and projecting it in the form of a dispersed spray on to the surface to be coated. The coating metal may be introduced into the hot gas stream either as powder or as wire.

The principal changes made in this edition of BS 2569-2 are:

- 1) the introduction of coating metals that have become established since 1955;
- 2) a new classification of types of coating according to service temperature, to avoid confusion with the previous edition;
- 3) in the specified thicknesses of coatings;
- 4) in the description of the method of preparing a reference surface;
- 5) the introduction of an adhesion test for certain classes of coatings, but it is hoped that a better test will be developed in the future;
- 6) the introduction of an appendix giving some broad guidance on design features.

It is essential that the purchaser should state the Class of coating; merely asking for metal spraying to be carried out to BS 2569-2 without the classification is insufficient.

Other coating metals, e.g. nickel aluminide, are becoming established but it is felt that their use cannot be standardized at this stage. Coating materials other than metals, although they may be applied by spraying, are outside the scope of this standard.

For the protection of iron and steel by sprayed aluminium and zinc coatings against atmospheric corrosion reference should be made to BS 2569-1*.

NOTE 1 Metric equivalents are given in Appendix F. The figures in British units are to be regarded as the standard. The metric conversions are approximate. More accurate conversions should be based on the tables in BS 350, "Conversion factors and tables"