

Specification for

Gold potassium cyanide for electroplating

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

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- Assay Offices Committee of Great Britain
- Association of Metal Sprayers
- BNF Metals Technology Centre
- British Jewellery and Giftware Federation Limited
- British Metal Finishing Suppliers' Association*
- British Steel Industry
- Chemical Industries Association*
- Copper Development Association
- Electricity Supply Industry in England and Wales
- Electronic Engineering Association*
- Engineering Equipment Users' Association
- Greater London Council
- Institute of Metal Finishing*
- Institute of Sheet Metal Engineering
- Institute of Vitreous Enamellers
- Institution of Corrosion Technology
- Metal Finishing Association*
- Ministry of Defence
- Motor Cycle Association of Great Britain*
- Society of Motor Manufacturers and Traders Limited
- Vitreous Enamel Development Council

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

- Bicycle Association of Great Britain
- Cutlery and Silverware Association
- Institution of Chemical Engineers
- International Tin Research Institute
- Society of Chemical Industry
- Zinc Development Association

This British Standard, having been prepared under the direction of the Surface Coatings (other than paints) Standards Committee, was published under the authority of the Executive Board and came into effect on 28 February 1979

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The following BSI references relate to the work on this standard:
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Foreword

This British Standard has been prepared under the direction of the Surface Coatings (other than paints) Standards Committee to provide requirements and methods of test for gold potassium cyanide for use in electroplating.

This British Standard is one of a series covering chemicals used in this industry, others in the series being as follows.

BS 558 & BS 564, *Nickel anodes, anode nickel and nickel salts for electroplating.*

BS 622, *Potassium and sodium cyanides for electroplating.*

BS 1468, *Tin anodes and tin salts for electroplating.*

BS 1561, *Silver anodes and silver salts for electroplating.*

BS 2656, *Zinc anodes, zinc oxide and zinc salts for electroplating.*

BS 2657, *Fluoroboric acid and metal fluoroborates for electroplating.*

BS 2868, *Cadmium anodes and cadmium oxide for electroplating.*

BS 4493, *Copper salts for electroplating.*

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, 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 requirements for gold potassium cyanide for use in electroplating and allied solutions, e.g. those used in autocatalytic or immersion processes.

2 References

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

3 Precautions

Cyanides are highly poisonous and it is essential to ensure that they are never touched with unprotected hands and that gloves are worn during sampling operations.

NOTE Attention is drawn to the cautionary notice on cyanide poisoning (ref. SHW 385) published by the Health and Safety Executive and obtainable from HMSO.

4 Appearance

Gold potassium cyanide for electroplating shall be white in colour.

5 Composition

The gold potassium cyanide shall correspond to the formula $\text{KAu}(\text{CN})_2$ and, when determined by the method specified in Appendix A, the gold content, expressed as gold (Au), shall be not less than 68.1 % by mass.

6 Turbidity

When examined by the method specified in Appendix B, an aqueous solution of the test sample shall be clear and colourless to the naked eye.

7 Insoluble matter

When determined by the method specified in Appendix C, the amount of matter insoluble in distilled water shall be not greater than 0.1 % by mass.

8 Loss on drying

When determined by the method specified in Appendix D, the loss in mass on drying shall be not greater than 0.25 % by mass.

9 Impurities

When determined by the appropriate methods specified in Appendix E, the amount of impurities present shall be not greater than the limits specified in Table 1.

10 Containers and marking

Gold potassium cyanide shall be supplied in airtight containers marked in accordance with current legislation and practice.

11 Sampling and size of sample

A representative sample of not less than 25 g shall be taken for the purpose of examination in accordance with this standard. The sample shall be taken from freshly opened packages and shall be packed in a clean airtight bottle and sealed until required for analysis.