

BS X 42:2020



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Specification for a Chromium(VI)-free pre-treatment primer

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 November 2020. It was prepared by Technical Committee ACE/65, *Non-metallic materials for aerospace purposes*. A list of organizations represented on this committee can be obtained on request to its committee manager.

Information about this document

This British Standard is one of a series for paints and varnishes suitable for aerospace purposes, as well as other vehicles and defence uses.

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

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Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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1 Scope

This British Standard specifies requirements for the materials and performance of a pre-treatment primer for aerospace, defence and other applications. The pre-treatment primer is for use on metallic substrates to provide adhesion for an anti-corrosive primer and finishing scheme.

This British Standard specifies requirements for a pre-treatment primer that can be used with British Standard X series primer and/or finishing schemes, or in combination with other finish schemes as required.

This British Standard is intended to be a Chromium(VI)-free alternative to BS X 32 and as such, is to be considered appropriate for products that can be described as thin-film/etch/ wash primers.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document¹⁾. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 2X-34:1998, *Specification for two component polyurethane finish for aerospace purposes*

BS EN 2436-004, *Aerospace series – Paints and varnishes – Corrosion resistant chromate-free two component cold curing primer – Part 004: High corrosion and fluid resistance with surface preparation tolerance*

BS EN 23270, *Specification for temperatures and humidities for conditioning and testing paints, varnishes and their raw materials*

BS EN ISO 1513, *Paints and varnishes – Examination and preparation of test samples*

[BS EN ISO 1514:2016](#), *Paints and varnishes – Standard panels for testing*

BS EN ISO 1518-1, *Paints and varnishes – Determination of scratch resistance – Part 1: Constant-loading method*

BS EN ISO 1520, *Paints and varnishes – Cupping test*

BS EN ISO 2409, *Paints and varnishes – Cross-cut test*

BS EN ISO 2811-1, *Paints and varnishes – Determination of density – Part 1: Pycnometer method*

BS EN ISO 2812-1, *Paints and varnishes – Determination of resistance to liquids – Part 1: Immersion in liquids other than water*

BS EN ISO 2812-2, *Paints and varnishes – Determination of resistance to liquids – Part 2: Water immersion method*

BS EN ISO 3251, *Paints, varnishes and plastics – Determination of non-volatile-matter content*

BS EN ISO 3679, *Determination of flash no-flash and flash point – Rapid equilibrium closed cup method*

BS EN ISO 3696:1995, *Water for analytical laboratory use – Specification and test methods*

BS EN ISO 4618, *Paints and varnishes – Terms and definitions*

BS EN ISO 4623-2, *Paints and varnishes – Determination of resistance to filiform corrosion – Part 2: Aluminium substrates*

BS EN ISO 9117-2, *Paints and varnishes – Drying tests – Part 2: Pressure test for stackability*

¹⁾ Documents that are referred to solely in an informative manner are listed in the Bibliography.