SRI LANKA STANDARD 1256 PART 40: 2017

(ISO 1514: 2016)

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METHOD OF TEST FOR
PAINTS AND VARNISHES
PART 40: PREPARATION OF STANDARD PANELS FOR TESTING (PANELS OTHER THAN BURNISHED STEEL, GLASS, WOOD AND ASBESTOS)

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard
METHOD OF TEST FOR PAINTS AND VARNISHES
PART 40: PREPARATION OF STANDARD PANELS FOR TESTING (PANELS OTHER THAN BURNISHED STEEL, GLASS, WOOD AND ASBESTOS)

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Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This Standard does not purport to include all the necessary provisions of a contract.

Sri Lanka Standard
METHOD OF TEST FOR PAINTS AND VARNISHES
PART 40: PREPARATION OF STANDARD PANELS FOR TESTING (PANELS OTHER THAN BURNISHED STEEL, GLASS, WOOD AND ASBESTOS)

NATIONAL FOREWORD

This Sri Lanka Standard was approved by the Sectoral Committee on Chemical and Polymer Technology and authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2017-08-30.

The text of the International Standard ISO 1514: 2016 Paints and varnishes – Standard panels for testing has been accepted for adoption as SLS 1256 : Part 40: 2017

This Sri Lanka Standard is identical with ISO 1514: 2016 Paints and varnishes – Standard panels for testing published by the International Organization for Standardization (ISO).

TERMINOLOGY AND CONVENTIONS

The text of the International Standard has been accepted as a suitable for publication, without deviation, as a Sri Lanka Standard. However, certain terminology and conventions are not identical with those used in Sri Lanka Standards. Attention is therefore drawn to the following:

a) Wherever the words “International Standard” appear referring to a particular Standards they should be interpreted as “Sri Lanka Standard”.

b) The comma has been used throughout as a decimal marker. In Sri Lanka Standards it is the current practice to use the full point at the base as the decimal marker.

c) Wherever page numbers are quoted, they are ISO/IEC page numbers.

Cross References

International Standard	Corresponding Sri Lanka Standard
ISO 1268 (all parts), Fibre-reinforced plastics — Methods of producing test plates	No corresponding Sri Lanka Standards
ISO 2409, Paints and varnishes — Cross-cut test	SLS 1256: Part 22 cross cut test
ISO 2808, Paints and varnishes — Determination of film thickness	SLS 1256: Part 15 Determination of film thickness
ISO 4287, Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters	No corresponding Sri Lanka Standards
ISO 8336, Fibre-cement flat sheets — Product specification and test methods	No corresponding Sri Lanka Standards
ISO 11949, Cold-reduced electrolytic tinplate	No corresponding Sri Lanka Standards
EN 520, Gypsum plasterboards — Definitions, requirements and test methods	No corresponding Sri Lanka Standards
EN 622 (all parts), Fibreboards — Specifications	No corresponding Sri Lanka Standards
EN 1396, Aluminium and aluminium alloys — Coil coated sheet and strip for general applications — Specifications	No corresponding Sri Lanka Standards
EN 10205, Cold reduced blackplate in coil form for the production of tinplate or electrolytic chromium/chromium oxide coated steel	No corresponding Sri Lanka Standards
EN 13523-1, Coil coated metals — Test methods — Part 1: Film thickness	No corresponding Sri Lanka Standards
EN 13523-22, Coil coated metals — Test methods — Part 22: Colour difference — Visual comparison	No corresponding Sri Lanka Standards
EN 15283-2, Gypsum boards with fibrous reinforcement — Definitions, requirements and test methods — Part 2: Gypsum fibre boards	No corresponding Sri Lanka Standards
EN 16245-1, Fibre-reinforced plastic composites — Declaration of raw material characteristics — Part 1: General requirements	No corresponding Sri Lanka Standards

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INTERNATIONAL STANDARD

ISO 1514

Fifth edition
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Paints and varnishes — Standard panels for testing

Peintures et vernis — Panneaux normalisés pour essai

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

This fifth edition cancels and replaces the fourth edition (ISO 1514:2004), which has been technically revised with the following changes:

a) the preparation by zinc-phosphate and chromate treatment, chromate conversion coating and acid chromating, was deleted;

b) the following materials have been amended: coil-coated panels, plastics panels, glass-fibre reinforced plastics composite panels (GRP), carbon-fibre reinforced plastics composite panels (CFP);

c) the former Annex B on characterization of zinc and zinc alloy coatings has been deleted;

d) a new Annex B on common substrate panel has been added;

e) the normative references have been updated.

Introduction

For many of the test methods most widely used for paints and varnishes, the type of panel used and the particular way in which it is prepared for use can affect the test results to a significant degree. Consequently, it is important to standardize as carefully as possible both the panels and the procedures used to prepare the panels prior to painting.

It is not possible to include in an International Standard all the types of panels and preparation needed for paint testing

This International Standard describes preparation procedures that are known to be reproducible and gives additional guidance in instances where there might still be doubt due to lack of international uniformity of the procedure.

Paints and varnishes — Standard panels for testing

1 Scope

This International Standard specifies several types of standard panels and describes procedures for their preparation prior to painting. These standard panels are for use in general methods of test for paints, varnishes and related products (see Annex B).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1268 (all parts), *Fibre-reinforced plastics — Methods of producing test plates*

ISO 2409, *Paints and varnishes — Cross-cut test*

ISO 2808, *Paints and varnishes — Determination of film thickness*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 8336, *Fibre-cement flat sheets — Product specification and test methods*

ISO 11949, *Cold-reduced electrolytic tinplate*

EN 520, *Gypsum plasterboards — Definitions, requirements and test methods*

EN 622 (all parts), *Fibreboards — Specifications*

EN 1396, *Aluminium and aluminium alloys — Coil coated sheet and strip for general applications — Specifications*

EN 10205, *Cold reduced blackplate in coil form for the production of tinplate or electrolytic chromium/chromium oxide coated steel*

EN 13523-1, *Coil coated metals — Test methods — Part 1: Film thickness*

EN 13523-22, *Coil coated metals — Test methods — Part 22: Colour difference — Visual comparison*

EN 15283-2, *Gypsum boards with fibrous reinforcement — Definitions, requirements and test methods — Part 2: Gypsum fibre boards*

EN 16245-1, *Fibre-reinforced plastic composites — Declaration of raw material characteristics — Part 1: General requirements*

3 Steel panels

3.1 Material

Steel panels intended for general testing (as opposed to panels intended for testing for particular applications and uses) shall be free from rust, scratches, staining, discoloration and other surface defects. The physical dimensions of the panel shall be as specified in the description of the test method, or as otherwise agreed.

3.2 Storage prior to preparation

Prior to preparation, panels shall be stored in a manner that protects them from corrosion.

3.3 Preparation by solvent cleaning

Wipe the panel to remove any excess oil, and then wash it thoroughly with a suitable solvent to remove all excess of oil.

Ensure that any small fibres deposited by cleaning cloths are removed in the cleaning process, and that cloths are changed at predetermined intervals to avoid redeposition of oily residues. Do not contaminate the cleaned panels. Allowing the solvent to evaporate, lightly wiping the panels with a clean linen cloth and subjecting the panels to a stream of warm dry air are suitable methods of drying. If necessary, lightly warm the panels to remove any traces of condensed moisture.

If it is not feasible to apply the paint coating immediately after cleaning, the cleaned panels shall be stored in a dry and clean atmosphere, such as a desiccator containing an active desiccant, until required for use. It is also acceptable practice to wrap the panels in suitable paper.

Contaminated surfaces may be cleaned using a solvent which evaporates rapidly and residue-free which does not alter the material chemically.

3.4 Preparation by aqueous cleaning (spray or immersion process)

Clean the panels with a commercially available aqueous alkaline cleaner. A spray cleaning process is recommended, but an immersion cleaning process is also acceptable. Maintain the cleaner concentration and temperature in accordance with the recommendations of the cleaner manufacturer.

Cleaning by a spraying method is performed in four steps.

a) Clean each side of the plates at least 10 s. Set the temperature and the spray pressure as recommended by the manufacturer of the cleaning agent.

b) Rinse each side of the plates with tap water. Ensure that the wash water is not significantly contaminated during the cleaning process. This can be achieved by flooding the reservoir for the wash water continuously or from time to time with fresh tap water.

c) Rinse each side of the plates with deionized water, which has a conductivity of max. 20 µS/cm.

d) Dry the plates immediately after rinsing in an oven or with a hot air stream.

Steps b) to d) shall also be applied after the cleaning in an immersion process.

If it is not feasible to apply the paint coating immediately after cleaning, the cleaned panels shall be stored in a dry and clean atmosphere, such as a desiccator containing an active desiccant, until required for use. It is also acceptable practice to wrap the panels in suitable paper.

Contaminated surfaces may be cleaned using a solvent which evaporates rapidly and residue-free which does not alter the material chemically.

3.5 Preparation by abrasion

3.5.1 General

Some testing applications require a more uniform and reproducible surface than is available on steel, as rolled by the mill. In such cases, it is necessary to remove surface variability and contamination through mechanical abrasion. To ensure complete removal of contamination and variability, it is necessary to completely remove the original mill surface.

Prior to abrading, panels should be cleaned as described in 3.3 or 3.4. Unless otherwise agreed, the surface removal shall be accomplished as described in 3.5.2 and 3.5.3.

3.5.2 Hand abrasion

This involves abrading the panel by hand using preferably P220 silicon carbide paper. The following is a suitable sequence of operations for use in hand abrasion.

a) Abrade the panel uniformly straight across its face in a direction parallel to any one side.

b) Abrade the panel at a right angle to the initial direction until all signs of the original abrasion have been removed.

c) Abrade the panel using a circular motion, until a pattern is produced consisting solely of circular abrasion marks, superimposed one upon another.

3.5.3 Circular mechanical abrasion

This involves burnishing the panel by mechanical means using preferably P220 silicon carbide paper. When this method is employed, the panel shall be burnished using a circular motion. The operation shall be considered complete when no sign is visible of the original surface or any undulations.

3.5.4 Linear grinding

This involves a conveyor system using an abrasive belt mounted on a vertical grinding head to remove the original mill surface and produce a linear scratch finish on the panel. Grinding the surface with abrasive belts removes contamination and provides a surface that is more uniform and reproducible than a typical mill finish. A P100 aluminium oxide abrasive belt is suitable for use in this operation.

3.6 Inspection and cleaning

Inspect the abraded panels to ensure that the original surface has been completely removed. Clean the panels thoroughly as described in 3.3 or 3.4 to remove any loose grit, steel particles or other contaminants.

If it is not feasible to apply the subsequent coating immediately, store the clean panels in a clean and dry atmosphere, such as a desiccator containing an active desiccant, or wrap the panels in suitable paper.

3.7 Preparation by phosphate treatment

3.7.1 General

Phosphate conversion coatings are available from a number of sources, as proprietary compounds or processes, for application by spray or immersion. Follow the manufacturer's directions as to the application of the conversion coating. Preparation of test panels may consist of one or more steps of cleaning, rinsing and conditioning prior to the application of the conversion coating. Additional rinsing will usually be required after the conversion coating has been applied. If phosphate-treated panels are required, use the following method of preparation.

3.7.2 Amorphous iron phosphate treatment

This conversion coating method consists of reacting the steel surface in an acid phosphate solution containing oxidizing agents and accelerating salts. The steel surface is converted to an amorphous iron phosphate coating that improves the adhesion of subsequently applied coatings and inhibits corrosion to a lesser degree than the crystalline zinc phosphate coating. This treatment can be applied by spraying or immersion. Solution temperatures, concentrations and contact times will vary with the method of application and should be maintained in accordance with the chemical manufacturer's recommendations. Iron phosphate coatings typically range in colour from yellow-blue to purple.

3.8 Preparation by blast-cleaning

Before blast-cleaning, clean the panels using the procedure described in 3.3 or 3.4.

General guidance on the preparation of steel panels by blast-cleaning is given in Annex A.

It is emphasized, however, that this preparation by blast-cleaning is not intended for cold-rolled steel panels that are specified in 3.1 for general testing purposes.

4 Tinplate panels

4.1 Material

The panel shall be bright-finish standard grade tinplate conforming to the requirements of ISO 11949 or EN 10205, and of nominal thickness between 0,2 mm and 0,3 mm. When the tinplate panels prepared in accordance with this International Standard are subsequently used in a test method, it is important that the designation code for the tinplate used is recorded in the test report for the test method concerned.

4.2 Preparation by solvent or aqueous cleaning

It is not necessary for tinplate panels to be specially protected during storage in the same manner as bare steel panels. Nevertheless, the surface of the panels can become contaminated with lubricants during processing. It is, therefore, recommended that the panels be cleaned prior to use by the procedure specified in 3.3 or 3.4 for steel panels.

4.3 Preparation by abrasion

Abraded tinplate panels are recommended if a test surface more uniform than that produced by solvent or aqueous cleaning is required. Carry out the cleaning operation as described for steel panels (see 3.5) except that the abrasion shall be performed much more lightly to avoid embedding abrasive in the surface and to avoid the complete removal of the tin plating at any point. It is, therefore, recommended that a good quality, fine silicon carbide paper be used, such as grade P320.

Continue the abrasion until the whole of the surface of the panel is covered by a pattern of circular abrasion marks superimposed one upon another and the original surface pattern is no longer visible with normal or corrected vision.

Clean the abraded panels thoroughly before use, as described in 3.3 or 3.4, to ensure that all loose grit, tin particles and other contaminants are removed. Do not contaminate the cleaned panel.

If the paint coating cannot be applied immediately, store the cleaned panels in a dry and clean atmosphere, such as in a desiccator containing an active desiccant, or wrap the panels in suitable paper.

5 Zinc- and zinc-alloy-coated panels

5.1 Material

The panel shall be cold-rolled carbon steel sheet coated with zinc or a zinc alloy. The specific type of zinc or zinc-alloy coating, as well as the thickness and physical dimensions of the panel shall be agreed between the purchaser and the seller. Some types of zinc and zinc-alloy coating are described in EN 10346.

The panel shall be free of chemical passivated treatments as surface changes resulting from these treatments will interfere with the adhesion of subsequently applied coatings.

A passivating treatment is applied at the mill in order to prevent wet storage stain (or white rusting) of the zinc-coated surface during storage. This passivated treatment, if not removed, interferes with the

adhesion of subsequently applied coatings. If necessary, remove the passivated treatment by abrasion as described in 4.3.

5.2 Preparation by solvent cleaning

If clean panels are required, without further preparation, use the cleaning procedure specified in 3.3 for steel panels.

5.3 Preparation by aqueous cleaning

If clean panels are required, without further preparation, use the cleaning procedure specified in 3.4 for steel panels. In general, cleaner concentration, temperature and contact time will be lower when cleaning zinc-coated steel. Highly alkaline cleaners will attack the zinc coating. For this reason, the alkaline solution used to clean zinc-coated steel should be in the pH range of 11 to 12, and never higher than 13.

6 Aluminium panels

6.1 Material

Aluminium alloy panels intended for general testing shall be of sheet or strip conforming to the requirements of EN 1396. Where other aluminium alloys are required for testing, the alloy shall be stated in the test report. The hardness shall be as specified for the particular test method. The thickness and other dimensions of the panel shall be as specified in the test method or as otherwise agreed.

6.2 Preparation by solvent cleaning

If clean panels are required, without any further preparation, use the cleaning procedure specified in 3.3 for steel panels.

6.3 Preparation by aqueous cleaning

If clean panels are required, without any further preparation, use the cleaning procedure specified in 3.4 for steel panels. In general, cleaner concentration, temperature and contact time will be lower when cleaning aluminium. In addition, it is important to verify that the selected alkaline cleaner is safe for use with aluminium. Some alkaline cleaners will etch aluminium. These cleaners shall not be used in the preparation of aluminium panels for general testing. Consult the cleaner manufacturer to determine if the product is safe for use with aluminium, and at what temperatures and concentrations it may be safely used. Panels cleaned by this method should be completely wetted by the water. This can be determined by momentarily immersing the panel in distilled or deionized water. When the panel is removed, the water should form an unbroken film on the metal surface, without beading up into discrete droplets or other water breaks.

6.4 Preparation by abrasion

If abraded panels are required P220 till P400 silicon carbide paper shall be used. Use the abrasion procedure specified in 3.4. Record the number of the used silicon carbide paper in the test report.

The sequence of abrading operations shall be as specified in 3.5.2, but the abrasive shall be wetted with a suitable solvent, and applied to the panel surface on a pad of soft cloth or other suitable material.

Continue the abrasion until the whole of the surface of the panel is covered by a pattern of circular burnishing marks superimposed one upon another and the original surface pattern is no longer visible with normal or corrected vision.

Clean the abraded panels thoroughly before use, as described in 3.3, to ensure that all loose grit, aluminium particles and other contaminants are removed.

Aluminium panels shall be prepared immediately prior to painting.

7 Coil-coating panels of steel or aluminium

7.1 Material

The material of the coil can be steel or aluminium. The thickness and other dimensions of the coil shall be as agreed.

7.2 Coating

The coil shall be coated with the agreed filler and dried (or stoved) for the specified time and under the specified conditions.

The following properties of the coating shall be agreed:

a) colour in accordance with RAL 840-HR, determined in accordance with EN 13523-22;

b) thickness of the dried coating, in micrometres, determined in accordance with one of the procedures specified in ISO 2808 or EN 13523-1;

c) roughness of the coating, determined in accordance with ISO 4287;

d) cross-cut test, determined in accordance with in ISO 2409.

7.3 Substrate

The cut panels shall be flat. The thickness and other dimensions of the panels shall be as specified in the test method or as otherwise agreed.

7.4 Preparation by solvent cleaning

Clean the coated panels with a suitable solvent on the day of use.

8 Plastics panels

8.1 Material

The panels shall be flat or polished. The thickness and other dimensions of the panels shall be as specified in the test method or as otherwise agreed.

8.2 Preparation by solvent cleaning

Clean the panels with a suitable solvent on the day of use. The solvent shall not attack the panel.

8.3 Preparation by detergent cleaning

Wash the panels thoroughly in a warm, aqueous solution of a non-ionic detergent.

8.4 Pretreatment by flaming

PP/EPDM (polypropylene/ethylene propylene diene monomer) and some types of PA 6 (polyamide from caprolactam) substrates shall be flamed after preparation (see 8.2 or 8.3).

9 Glass-fibre reinforced plastic composite panels (GRP)

9.1 Material

Glass-fibre reinforced plastic composite panels intended for general testing shall be conforming to the requirements of ISO 1268 (all parts).

9.2 Preparation by solvent cleaning

Clean the panels with a suitable solvent on the day of use.

9.3 Preparation by detergent cleaning

Wash the panels thoroughly in a warm, aqueous solution of a non-ionic detergent.

10 Carbon-fibre reinforced plastic composite panels (CFRP)

10.1 Material

Carbon-fibre reinforced plastic composite panels intended for general testing shall be conforming to the requirements of EN 16245-1.

10.2 Preparation by solvent cleaning

Clean the panels with a suitable solvent on the day of use.

10.3 Preparation by detergent cleaning

Wash the panels thoroughly in a warm, aqueous solution of a non-ionic detergent.

11 Glass panels

11.1 Material

The panels shall be of flat or polished float glass. The thickness and other dimensions of the panel shall be as specified in the test method or as otherwise agreed.

11.2 Preparation by solvent cleaning

Clean the panels on the day of use by the procedure specified in 3.3 for steel panels.

11.3 Preparation by detergent cleaning

Wash the panels thoroughly in a warm, aqueous solution of a non-ionic detergent.

Dry the cleaned panels by allowing the rinse water to evaporate from the surface. If necessary, warm the panels slightly to remove remaining traces of moisture.

12 Hardboard

12.1 Material

Fibre building boards are sheet materials conforming to the requirements of EN 622 with primary bonding derived from the felting of the fibres and their inherent adhesive properties. The strength of these boards can be enhanced by the use of bonding materials, e.g. adhesives or additives.

12.2 Preparation

Cut the sheet to produce test panels of the required size. Using a dry cloth, wipe both sides and all edges of each panel until free from dust. Store the panels at (23 ± 2) °C and at (50 ± 5) % relative humidity, with free access to air, for a period of not less than three weeks. The moisture content of the hardboard panels shall be (6 ± 2) % (mass fraction). Use the smooth surface for testing the paint or related product.

13 Gypsum plasterboards panels and gypsum boards with fibrous reinforcement panels

13.1 Material

Gypsum plasterboard and gypsum boards with fibrous reinforcement panels are building boards composed of a core of set gypsum plaster conforming to the requirements of EN 15283-2 and EN 520. The core may be solid or cellular gypsum, and may contain a small proportion of fibre. The thickness of the board is approximately 10 mm. One paper face of the board is designed to be directly decorated, without the initial application of a plaster coat or coats. This face shall be used for testing the paint or related product. When stored in direct sunlight, the paper facing can have a tendency to discolour or "bleed" when coated with certain types of paint.

13.2 Preparation

Cut the panels under dry conditions to produce test panels of the required size. Seal the edges of each test panel with a suitable adhesive tape. Wipe the panels free from dust with a dry cloth. Store the panels at (23 ± 2) °C and (50 ± 5) % relative humidity, with free access to air, for a period of not less than three weeks. The panels should not be exposed to direct sunlight during storage. Wipe all panels free from dust immediately prior to use.

14 Fibre-reinforced cement panels

The material and preparation shall conform to the requirements of ISO 8336.

Annex A
(informative)

General guidelines on preparation of steel panels by blast-cleaning

Preparation of steel panels by blast-cleaning is not intended for cold-rolled steel sheet, but can be required for hot-rolled steel to remove rust, mill scale, etc. For such purposes, the following general guidance is given. For additional information, see ISO 8504-2.

The selection of abrasive size and type should be based on the hardness and surface condition of the steel to be cleaned, the type of blast-cleaning to be employed and the surface profile to be produced. For general testing purposes, the abrasive used should be angular or sub-angular and be of a material harder than the steel to be cleaned. Suitable abrasives include steel grit, aluminium oxide, garnet, and copper or coal slag. The particle size of the abrasive used may conveniently be between 0,5 mm and 1,2 mm. Other abrasives and sizes may be specified for particular tests. Requirements for blast-cleaning abrasives are given in ISO 11124 for metallic blast-cleaning abrasives and ISO 11126 for non-metallic blast-cleaning abrasives.

Before blast-cleaning, remove any visible deposits of oil or grease by solvent cleaning, aqueous cleaning or any other suitable method. These deposits, if not removed, will contaminate the abrasive, resulting in contamination of subsequently blast-cleaned panels. Any other surface imperfections, such as sharp edges or burrs, should also be removed.

Clean, dry compressed air should be used for nozzle blasting. Any of the methods of blast-cleaning described in ISO 8504-2:2000, Clause 5, can be used to achieve a blast-cleaned surface. Compressed-air abrasive blast-cleaning and centrifugal abrasive blast-cleaning are effective for this purpose.

It should be noted that, when steel is cleaned with a wet abrasive, it can rust rapidly. It might be necessary to add rust inhibitors to the water to temporarily prevent rust formation. Some inhibitors can interfere with the performance of certain coating systems.

Blast-cleaning should be continued until the surface shows a blast-cleaned pattern completely free from any visible contamination or discoloration and corresponding to preparation grade Sa 3 as defined in ISO 8501-1. Panels prepared as above should have a surface roughness R_z (maximum height of profile) of not greater than 30 % of the recommended dry film thickness of the coating to be applied. After dry abrasive blast-cleaning, remove dust and loose residues from the surface by vacuum, by brushing or by blowing off with a stream of compressed air which is clean and dry. After wet abrasive blast-cleaning, rinse the surface with fresh water to remove loosely adhering residue. Dry the surface using compressed or heated air prior to application of paint. Unless otherwise agreed, the panels should be painted as soon as possible after blast-cleaning.

Blast-cleaned panels are susceptible to rusting if they are not coated immediately after cleaning. To minimize the risk of rust formation, it is not advisable to blast-clean panels unless the temperature of the panel is at least 3 °C higher than the dew point of the surrounding air.

Annex B
(informative)

Common substrate panels

Table B.1 — Common substrate panels

Substrate panels	Technical delivery conditions composition
Steel panels, (including coil steel panels)	EN 10346 EN 13523–0
Tin-plate panels, steel and aluminium (including coil panels)	ISO 11949 EN 10205
Zinc-coated panels	EN 10346
Aluminium panels, coil aluminium panels	EN 1396
Plastics panels	—
Glass-fibre reinforced plastics composite panels (GRP)	ISO 1268 (all parts)
Carbon-fibre reinforced plastics composite panels (CFRP)	EN 16245–1
Glass panels	—
Hardboard panels	EN 622–1, EN 622–2, EN 622–3
Gypsum boards with fibrous reinforcement panels Gypsum plasterboards panels	EN 15283–2 EN 520
Fibre-reinforced cement panels	ISO 8336

Panels made from other materials and by other preparation procedures may be used by agreement, when specified for the product under test.

Bibliography

[1] ISO 8501-1, *Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness — Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings*

[2] ISO 8504-2:2000, *Preparation of steel substrates before application of paints and related products — Surface preparation methods — Part 2: Abrasive blast-cleaning*

[3] ISO 11124 (all parts), *Preparation of steel substrates before application of paints and related products — Specifications for metallic blast-cleaning abrasives*

[4] ISO 11126 (all parts), *Preparation of steel substrates before application of paints and related products — Specifications for non-metallic blast-cleaning abrasives*

[5] EN 10346, *Continuously hot-dip coated steel flat products — Technical delivery conditions*

[6] EN 13523-0, *Coil coated metals — Test methods — Part 0: General introduction*

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SRI LANKA STANDARDS INSTITUTION

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The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

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In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.

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