International Standard ISO 5736

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Prints — Determination of resistance to sterilization of prints on metallic substrates

Impressions — Détermination de la résistance à la stérilisation des impressions sur supports métalliques

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5736 was developed by Technical Committee ISO/TC 130, *Graphic technology*, and was circulated to the member bodies in April 1982.

It has been approved by the member bodies of the following countries :

Australia	India	South Africa, Rep. of
Austria	Italy	Sweden
Czechoslovakia	Korea, Rep. of	Switzerland
Egypt, Arab Rep. of	New Zealand	USSR
Finland	Poland	
France	Romania	

The member body of the following country expressed disapproval of the document on technical grounds :

United Kingdom

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Prints — Determination of resistance to sterilization of prints on metallic substrates

1 Scope and field of application

This International Standard specifies a method for determining the resistance to sterilization of prints. The method is applicable to metallic substrates (plates and thin sheets) whether or not they are coated with a sterilizable layer. It does not concern rotogravure prints.

2 Definition

resistance of a print to sterilization : A print is considered to be resistant to sterilization in so far as it does not undergo any adverse change and/or does not bleed when subjected to the trial conditions specified in this International Standard.

3 Principle

Sterilization, in a sterilizer, of a specimen for 1 h at 125 °C and 230 kPa[1].

Assessment of the extent of change to the print and any bleeding in the unprinted metallic substrate.

4 Apparatus and reagents

4.1 Sterilizer, thermostatically controlled at 125 °C.

4.2 Dryer, maintained at 150 °C.

4.3 Printing device.

4.4 Metallic substrate (tin plate).

4.5 White coating, resistant to sterilization.

4.6 Overprint varnish, resistant to sterilization.

5 Preparation of the specimen

Spread uniformly a quantity of ink over the whole surface of a metallic substrate with minimum dimensions 40 mm × 60 mm.

Dry in a dryer (4.2) for 15 min at 150 °C.

Coat lengthwise half of the inked metallic substrate with overprint varnish (4.6), then allow to dry for 15 min at 150 °C.

Cut in half breadthwise the inked metallic substrate prepared as above and firmly press[2] one of the halves obtained into contact with another metallic substrate coated with a white coating resistant to sterilization in order to constitute a specimen.

6 Procedure

Place the prepared specimen, in the sterilizer (4.1) filled with water and sterilize for 1 h at 125 °C and 230 kPa.

Remove and rinse the specimen with water without rubbing and after separating the part covered with the white coating from the inked part (varnished and not varnished) dry it in open air.

7 Assessment of results

Check

a) if the varnished surface and the non-varnished surface of the inked substrate having passed through the sterilizer have altered (colour, gloss, anchoring) when compared with the other half of the inked substrate non-sterilized;

b) if bleeding has occurred on the side of the substrate coated with the white coating.

Any alteration to the colour, gloss, or anchoring implies a bad resistance of the sample.

8 Test report

The test report shall indicate the results obtained and any deviation, by agreement or otherwise, from the procedure specified in this International Standard.

1) More severe test conditions may be retained if mentioned in the test report.

2) As general guidance, the average value of this pressure will be 4 000 Pa.

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