SLOVENSKI STANDARD
SIST ISO 12636:2002

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Graphic technology -- Blankets for offset printing

Technologie graphique -- Blanchets pour impression offset

Ta slovenski standard je istoveten z: ISO 12636:1998

ICS:

37.100.10	Reprodukcijska oprema	Reproduction equipment

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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International Standard ISO 12636 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

Annex A of this International Standard is for information only.

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Introduction

The blanket is an essential part of every offset printing press. Its properties exert a profound influence on the mechanical conditions within the press and the visual characteristics of the prints produced. It is therefore useful to provide test methods, unified data, and tolerances for some essential properties of the blankets. This permits the suppliers to state properties of blanket types in a unified and well-known manner. It also helps the printer to select the appropriate blanket type for a particular press type or press condition. A further benefit is that the design of printing presses can be based on blanket data resulting from unified test methods.

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Graphic technology — Blankets for offset printing

1 Scope

This International Standard defines vocabulary, specifies test methods, characteristics, ordering and labeling information for blankets for offset printing. This International Standard does not apply to untensioned or unclamped blankets for offset printing, nor offset printing sleeves used with gapless presses.

2 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

2.1
across direction
direction of the side of the blanket as intended to be applied perpendicular to the direction of rotation

2.2
around-the-cylinder direction
direction of the side of the blanket as intended to be applied in the direction of the rotation

2.3
average thicknes
mean of four measurements on a cut blanket where the measurements have been made on the points indicated in figure 1, namely on 2 diagonally opposed corners and one each at the middle of the two sides that are perpendicular to each other within a right triangle
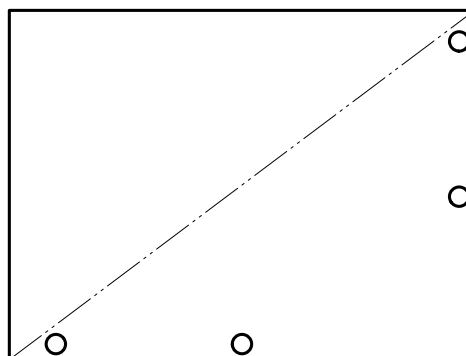

Figure 1 — Thickness measurement points

2.4
blanket
composite body, consisting of coated carrier material, e.g. fabric, used for transfer of the printing ink from the forme onto material to be printed on, e.g. for offset printing

2.5
compressibility-deflection
average thickness reduction of a blanket measured under a specific pressure, expressed in millimetres

2.6
compressibility-indentation
average depth of impression, *I*, in a blanket measured under a specific pressure, expressed in millimetres or as percentage indentation I_p

2.7
elongation
increase of the dimension in the around-the-cylinder direction of a blanket under longitudinal stress, expressed in percent of the length at a specified force per width

2.8
packing
underlay material placed under the blanket to adjust the effective thickness of the blanket on press

2.9
printing surface
side of the blanket that is used for the transfer of printing ink

2.10
shrinkage
decrease in thickness due to exposure of the blanket printing surface to a liquid, expressed as a percentage of the original blanket thickness, or as an absolute thickness decrease in millimetres

2.11
sizes
dimensions (thickness, width and length) of a cut ready-to-use blanket

2.12
swelling
increase in thickness due to exposure of the blanket printing surface to a liquid, expressed as a percentage of the original blanket thickness, or as an absolute thickness increase in millimetres

2.13
tensile strength
force per unit width required for breaking a blanket under longitudinal stress in the around-the-cylinder direction

2.14
thickness variation
difference between the greatest and the smallest thickness value in millimetres

3   Requirements

3.1   Dimensions

3.1.1   Thickness

The test method according to 4.1 shall be used. For applications with packing the nominal thickness shall be 1,68 mm or 1,95 mm. For applications without packing the nominal thickness should be agreed upon between the supplier and the user of the product.

NOTE   The nominal thickness should be stated in technical descriptions and when ordering.

The thickness variations of blankets with an area not in excess of 1,5 m^2 shall be less than ± 0,02 mm, those of greater sizes shall be less than ± 0,03 mm. No individual thickness measurement shall yield a value which deviates more than 0,05 mm from the ordered thickness.

3.1.2 Accuracy of width and length

If one of the sides is 1 m or less, the tolerance shall be ± 3 mm, otherwise it shall be ± 4 mm.

3.1.3 Plan view

The sides of the blanket shall form right angles. The difference between the length of the diagonals and the length of any two parallel sides shall not exceed 0,5 %.

3.2 Materials and surface finish

No specifications are given. The material formulation and surface finish are the choice of the manufacturer and may be stated in technical descriptions by the supplier. The surface finish may vary, e.g. cast (molded) or ground (buffed).

3.3 Elongation

The elongation E shall be less than 1,5 %. The test method according to 4.2 shall be used or any other method where results can be correlated to those of the test method.

3.4 Tensile strength

For all blankets of thickness 1,68 mm or more, the tensile strength shall be greater than 40 N/mm. The test method according to 4.3 shall be used or any other method where results can be correlated to those of the test method. For blankets of lower thickness no specification is given.

3.5 Compressibility

No specification is given. Either test method according to 4.4 or 4.5 shall be used.

NOTE   The use of compressibility-deflection or compressibility-indentation method is the choice of the manufacturer and may be stated by the supplier.

3.6 Thickness change

3.6.1 Swelling or shrinkage due to printing ink ingredients

The thickness change ΔT due to exposure to printing ink ingredients shall not exceed 4 % maximum swelling or 2 % maximum shrinkage. The test method according to 4.6 for each property shall be used.

3.6.2 Swelling and/or shrinkage due to blanket washes

When testing blanket washes for their compatibility to an offset printing blanket, it is the option of the blanket manufacturer to report test results using the test method according to 4.6 for each property.

When choosing a blanket cleaning material for composition, it should be tested for compatibility with the blanket.

NOTE   The choice of a proper wash is a difficult decision due to the need to balance effectiveness versus safety and environmental needs.

3.7 Hardness

The overall hardness and the microhardness are not specified in this International Standard. They are the choice of the manufacturer.

3.8 Cut blanket markings

On the non-printing side of the cut-to-size blanket the following should be reported:

a) Blanket dimensions (average actual thickness, width and length), indicating which dimension is the around-the-cylinder direction. If the recorded thickness is nominal this shall be stated.