
**Graphic technology — Multilingual
terminology of printing arts —**

**Part 5:
Screen printing terms**

*Technologie graphique — Terminologie multilingue des arts graphiques —
Partie 5: Termes d'impression au cadre*
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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 12637 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 12637-5 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

This first edition constitutes a minor revision of ISO 12637-2:1997.

ISO 12637 consists of the following parts, under the general title *Graphic technology — Multilingual terminology of printing arts*:

— *Part 1: Fundamental terms*

[ISO 12637-5:2001](#)

— *Part 5: Screen printing terms*

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The following parts are currently under development:

— *Part 2: Prepress terms*

— *Part 3: Printing terms*

— *Part 4: Post press terms*

Introduction

Documentation gives rise to numerous international exchanges of both intellectual and material nature. These exchanges often become difficult, either because of the great variety of terms used in various fields or languages to express the same concept, or because of the absence of, or the imprecision of, useful concepts.

To avoid misunderstandings due to this situation and to facilitate such exchanges, it is advisable to select terms to be used in various languages or in various countries to express the same concept, and to establish definitions providing satisfactory equivalents for the various terms in different languages.

In addition, this part of ISO 12637 consists of several parts prepared over a long period of time and it may be that the preparation of the later parts introduces small inconsistencies with the early ones.

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Graphic technology — Multilingual terminology of printing arts —

Part 5: Screen printing terms

1 Scope

This part of ISO 12637 defines selected terms relevant to the field of screen printing and is intended to facilitate international communication in this field.

In order to facilitate their translation into other languages, the definitions are worded so as to avoid, as far as possible, any peculiarity attached to one language.

NOTE In addition to terms and definitions used in one of the three official ISO languages (English, French and Russian), this part of ISO 12637 gives the equivalent terms in the German language; these are published under the responsibility of the member body for Germany (DIN). However, only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

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2 Terms and definitions

English

2.1 coating thickness

〈screen printing〉 difference between the screen-printing stencil thickness and thickness of mesh

2.2 direct-indirect stencil

screen printing stencil with which the direct and the indirect production methods are combined

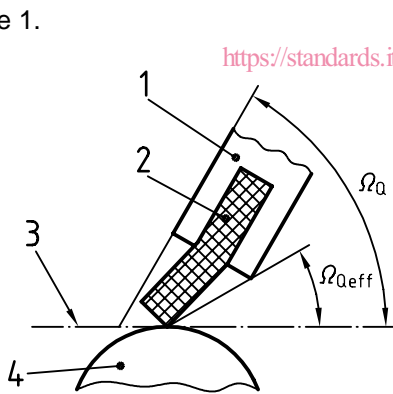
2.3 direct stencil

screen printing stencil produced on the screen printing carrier

2.4 effective squeegee angle

Ω_{Qeff}
angle between the tangent at the squeegee blade and the printing substrate level, or the tangent at the pressure cylinder at the point of contact; the squeegee blade forms this angle with the printing forme

See Figure 1.



Key

- 1 Squeegee holder
- 2 Squeegee blade
- 3 Printing material surface
- 4 Printing cylinder: pressure element

Figure 1 — Effective squeegee angle

2.5 frame cross-section
frame cut-off

height × depth of the frame cross-section with tubes; for material thickness/length of a cross-section blank, the amount of material in a transverse cut; if frame is hollow, material thickness width

German

2.1 Schichtdicke

〈Siebdruck〉 Differenz zwischen Siebdruck-Schablonendicke und Siebdicke

2.2 Kombisiebdruckschablone

Siebdruck-Schablone, bei der direkte und indirekte Herstellungsverfahren kombiniert werden

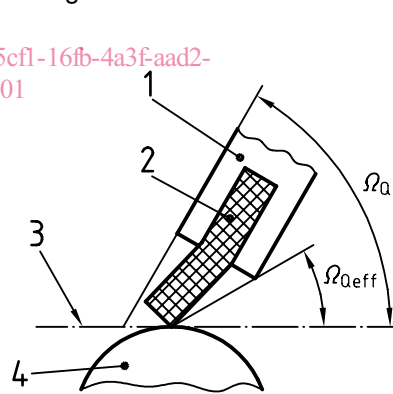
2.3 Direktsiebdruckschablone

Siebdruckschablone, die am Siebdruckschablonen-träger hergestellt wird

2.4 wirksamer Rakelanstellwinkel

Ω_{Qeff}
Winkel zwischen Tangente am Rakelblatt und Bedruckstoffebene bzw. Tangente am Druckzylinder im Kontaktpunkt, in dem das Rakelblatt auf der Druckform aufliegt

Siehe Abbildung 1.



Bildlegende

- 1 Rakelfassung
- 2 Rakelblatt
- 3 Bedruckstoffebene
- 4 Druckzylinder: Druckkörper

Abbildung 1 — Wirksamer Rakelanstellwinkel

2.5 Rahmenprofilgröße
Querschnitt

bei Rohren — Rahmenprofilhöhe × Rahmenprofiltiefe; für die Werkstoffdicke/-länge — Werkstoffmenge in einem Querschnitt; bei hohlen Rahmen — Breite der Werkstoffdicke

2.6**frame height**

dimension perpendicular to the frame level, including all parts firmly attached to the frame

2.7**ghost image**

〈screen printing〉 unintended, partial alteration of the density of colour within the image through the influence of an earlier motif printed on the same screen printing stencil carrier

2.8**image size****image area**

length × width of the rectangle, oriented according to the press set-up forme, enclosing the image

2.9**image store**

store (e.g. printing forme) containing all the information required to apply the printing ink to the printing substrate for the reproduction of illustrations and/or text

2.10**indirect stencil**

screen printing stencil which is attached to the screen printing stencil carrier after its production

2.11**ink consumption**

wet volume of a certain printing ink required for printing with a certain printing forme

NOTE The relative ink consumption refers to the open stencil image size.

2.12**ink rest****squeegee clearance**

area on the upper surface of the screen printing forme not stroked by the squeegee

2.13**ink trail**

release zone behind the printing squeegee in which the substrate and the printing forme are held in contact by means of the printing ink for a limited period of time

2.14**inner frame dimension**

inner dimensions of length × width of a screen printing frame, excluding all parts firmly attached to the frame, measured in the projected frame level

2.6**Rahmenhöhe**

Maß senkrecht zur Rahmenebene unter Einschluss aller zum Rahmen gehörenden Teile

2.7**Geisterbild**

〈Siebdruck〉 ungewollte, partielle Veränderung der Farbtiefe innerhalb des Druckbildes durch Einfluss eines früher gedruckten Motivs auf demselben Siebdruck-Schablonenträger

2.8**Druckbildfläche**

Länge × Breite des nach dem Einteilungsbogen ausgerichteten Rechtecks, welches das Druckbild einschließt

2.9**Druckbildspeicher**

Speicher (z. B. Druckform), der für die Wiedergabe von Bild und/oder Text durch Drucken alle zur Aufbringung der Druckfarbe auf den Bedruckstoff erforderlichen Informationen enthält

2.10**Indirektsiebdruckschablone**

Siebdruck-Schablone, die nach ihrer Herstellung am Siebdruck-Schablonenträger befestigt wird

2.11**Farbverbrauch**

Nassvolumen einer bestimmten Druckfarbe, das beim Drucken mit einer bestimmten Druckform benötigt wird

ANMERKUNG Der relative Farbverbrauch bezieht sich auf die offene Schablonenfläche.

2.12**Farbruhe**

von der Siebrakel nicht bestrichene Fläche auf der Siebdruckform-Oberseite

2.13**Siebschleppe**

diejenige Fläche hinter der druckenden Siebdruckrakel, in der Bedruckstoff und Siebdruck-Schablone zeitlich begrenzt mittels Druckfarbe in Kontakt gehalten werden

2.14**Rahmeninnenmaße**

lichte Maße von Länge × Breite eines Siebdruckrahmens unter Ausschluß aller zum Rahmen gehörenden Teile, in der projizierten Rahmenebene gemessen

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2.15

mesh count

number of wire threads per unit length in a screen mesh

2.16

mesh cutting size

mesh cut-to-size piece

length \times width of a cut piece of mesh required for covering the screen printing frame cut from a roll

2.17

mesh elongation

increase in length or width of the mesh due to applied force

2.18

mesh extension

relative mesh elongation

mesh elongation divided by the original mesh length

2.19

mesh tension

tensile force with which the screen printing stencil carrier strains the screen printing frame

2.20

off-contact distance

distance between the lower side of the screen printing forme and the printing substrate when ready to print

2.21

open mesh area percentage

proportion of the surface of all mesh openings with respect to the total screening surface, in percent

2.22

open stencil area

screen printing stencil area

sum of the areas of all image elements of the screen printing stencil

2.23

outer frame dimension

length \times width of a screen printing frame measured over all those parts belonging to the frame in the projected frame level

NOTE The outer frame dimensions can be the same as the cross section blank dimensions.

2.24

percent open screen volume

percent mesh volume

relationship between that part of a screen mesh that is blocked by threads, and a part that is open or between threads

2.15

Siebfeinheit

Zahl der Siebfäden je Längeneinheit

2.16

Siebzuschnittgröße

Länge \times Breite eines zugeschnittenen Stückes eines Siebes, das zum Bespannen des Siebdruckrahmens benötigt wird

2.17

Siebverlängerung

Längenänderung des Siebes in der Siebebene durch Krafteinwirkung

2.18

Siebdehnung

Siebverlängerung dividiert durch die ursprüngliche Sieblänge

2.19

Siebspannung

die Zugkraft, mit welcher der Siebdruck-Schablonenträger den Siebdruckrahmen beansprucht

2.20

Siebdruckform-Distanz

Abstand zwischen Siebdruckform-Unterseite und Bedruckstoff im druckbereiten Zustand

2.21

Sieböffnungsgrad (Gewebe)

Flächenanteil der Summe aller Sieböffnungen an der gesamten Siebfläche in Prozent

2.22

offene Schablonenfläche

offene Siebdruck-Schablonenfläche

Flächensumme aller Druckbildelemente der Siebdruck-Schablone

2.23

Rahmenaußenmaße

Länge \times Breite eines Siebdruckrahmens über alle zum Rahmen gehörenden Teile, in der projizierten Rahmenebene gemessen

ANMERKUNG Die Rahmenaußenmaße können gleich den Profil-Zuschnittmaßen sein.

2.24

offenes Siebvolumen, relativ

relatives Siebvolumen abzüglich des Volumens seiner materiellen Siebbestandteile, somit der Raum des Siebes, der mit Druckfarbe gefüllt werden kann, dividiert durch den entsprechenden Siebflächeninhalt

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2.25 printing

process of reproduction involving the transfer of a material either coloured or not (ink, etc.) to a substrate, using a relief, planographic, intaglio, stencil or other image store

2.26 printing forme

image store in the form of a tool adapted in such a way that printing ink can be transferred to the printing substrate to reproduce a textual and/or pictorial representation

2.27 printing head

part of the printing machine which, by acting against the printing forme or intermediate surface, supplies the pressure necessary for ink transfer

2.28 printing ink

substance applied to the printing substrate during printing

2.29 printing side of the screen printing forme (lower side)

side of the screen printing forme on which the printing ink is applied to the printing substrate

2.30 rotary screen printing

screen printing procedure using a cylindrical printing forme

NOTE 1 Since the rotary forme rotates synchronously with the substrate an endless pattern can be printing.

NOTE 2 Printing ink is pumped inside the cylindrical form; the squeegee is mounted inside the cylindrical forme.

2.31 screen angle

for oblong-shaped half-tone dots, the angle which the principal axis of the screen makes with the reference direction; for circular and square dot shapes, the smallest angle which an axis of the screen makes with the reference direction

[unit: degree]

2.25 Drucken

Prozess der Vervielfältigung unter Verwendung eines Hochdruck-, Flachdruck-, Tiefdruck-, Durchdruck- oder eines anderen Druckbildspeichers, bei dem die Übertragung eines Mediums (z. B. Druckfarbe) auf eine Unterlage (Bedruckstoff) erfolgt

2.26 Druckform

Druckbildspeicher in Gestalt eines Werkzeugs, das so bearbeitet ist, dass damit Druckfarbe auf den Bedruckstoff zur Wiedergabe einer textlichen und/oder bildlichen Darstellung übertragen werden kann

2.27 Druckkörper

Teil einer Druckmaschine, der zum Übertragen der Druckfarbe von einem das Druckbild tragenden Körper (Druckform oder Übertragzylinder) mit diesem zusammen den erforderlichen Pressdruck herstellt

2.28 Druckfarbe

Substanz, die beim Drucken auf den Bedruckstoff aufgebracht wird

2.29 Siebdruckform-Unterseite

Seite der Siebdruckform, auf der die Druckfarbe an den Bedruckstoff abgegeben wird

2.30 Rotationssiebdruck

Siebdruckverfahren welches eine zylindrische Siebdruckform verwendet

ANMERKUNG 1 Da sich die Rotationssiebdruckform synchron mit dem Bedruckstoff dreht, kann man ein endloses Muster drucken.

ANMERKUNG 2 Die Druckfarbe wird in die zylindrische Siebdruckform gepumpt; die Rakel ist in der zylindrischen Siebdruckform befestigt.

2.31 Rasterwinkelung

die Winkel, in denen die Hauptachsen der Rasterpunkte zueinander stehen müssen, um unerwünschte Moiréeffekte zu vermeiden

[Einheit: Grad]