BASIC QUALITY STANDARDS

1. **Purpose**
   The purpose of the procedure is to standardize the rules for verification of files by Books Line.

2. **Acceptable deviations from the ideal resulting from technological constraints**
   Technological constraints are the result of: the quality of the materials used in the production process in respect of a given order and the constraints imposed by the machines used to complete the order.

2.1. Printing

A colour proof may be provided for printing to enable production of a print copy consistent with it. The colour proofs provided for printing must be uniform. If proofs are provided together with, for instance, a sheet from a previous print (print sheet without additional enhancements), the Client is obliged to specify which of the proofs provided is the operative proof.

In the absence of colour guidelines, the printing process is carried out on the basis of a preview of the graphics on a specialized colour test monitor based on the ISO standard. Where the RGB colour space is used in production files, the colour of the print may differ significantly from the file / preview / template submitted for printing.

Due to the specificity of the digital printing process, it may be accompanied by the occurrence of cockling. If this occurs, it may not be possible to maintain the varnishing standards. A layer coated with a UV varnish showing varnish-free areas on the varnished surface is deemed faulty.

2.1.1.1. Quality standards

Digital printing technology provides the highest quality of colour reproduction; however, it is still possible that some defects may occur.

a. Inkjet printing:

- minor imperfections may occur in the form of streaks/lines resulting from automatic compensation triggered by temporary clogging of the print head. The resultant marks would be noticeable on sections of the print where dark, highly saturated colours are used, in particular on large-format photographs and solid colour backgrounds,
- minor imperfections may occur in the form of white lines called “missing nozzles” resulting from clogging of the print head,

- the above imperfections may occur in particular when printing on coated substrates.

a. Electrophotographic printing:
- glossiness of the print,
- possible uneven coverage and minor discoloration where solid colour is applied,
- the above imperfections may occur in particular when printing on coated substrates.

2.2. Proofs

A proof provided for printing as the operative colour proof should be produced in accordance with ISO 12647-7 and provided together with a confirmation of certification. In the absence thereof, a printout can be used as a printing proof, however it has to be expected that colour discrepancies between the finished product and the proof may occur.

The following details should be shown on the proof:
- date on which it was produced,
- project title/order number,
- UGRA-FOGRA media wedge,
- measurement compliance with the applicable standard.

2.3. Print sheets from previous print runs

A print sheet from a previous print run, which has not been subjected to additional enhancement processes (UV varnish, glossy/matte/soft-touch foils) can also be used as a print proof. The order from which the sheet originates should not have been completed earlier than six months prior to the current order, and the sheet itself should not have been exposed to direct sunlight. The substrate of the sheet provided as a colour proof should be consistent with the material to be used for printing the current order. This is crucial in terms of correctness of the white colour.

2.4. Approval of a print at the machine by the Client

In the event that the Client approves a print directly at the machine, the Client is obliged to sign the sheets that automatically become a proof for printing. Printing of the given print run is then carried out using that proof.

2.5. Printing without a colour proof or approval by the Client

Printing will be carried out in compliance with the applicable ISO standard. The colour of the print is affected by the material chosen by the Client and the printing technology applied. In the event that the white colour does not meet the colour terms of reference as prescribed by the standard, it is possible that a discrepancy between

the colours may occur. The colours of the finished product are also affected by additional enhancements such as:

- UV/dispersive varnishes,
- glossy/matte/soft-touch/textured foils.

Visual assessment is carried out in standardized D50 lighting consistent with the ISO standard. The printing of special colours is carried out based on the Pantone colour chart. Due to the inability to carry out an accurate densitometric analysis of the colour intensity, the colour shall be deemed to have been correctly printed when, during the visual assessment, it falls between the (+) proof and the (-) proof provided by the Client. Additional enhancements such as application of glossy/matte/soft-touch/textured foils or UV varnishes can cause the colour to change unpredictably, depending on the graphic elements of the printed product. Books Line is not liable for any changes in colour following the application of additional enhancements, as the changes occur independently of Books Line's actions and cannot be measured in any way. In order to avoid unwanted changes in colour, it is necessary to carry out tests, which can be carried out at the express request of the Client and for which the Client will be charged.

2.6. Colour registration

Permissible deviations in registration of successively printed colours as measured in the centre of the sheet:

- Acceptable <= 0.4 mm
- Not acceptable> 0.4 mm

2.7. Varnish registration

The varnish layer should be spread evenly and without any abrasions. The following differences in registration of the varnish applied with the image are permitted:

Spot/raised (multi-level)/textured UV varnish:

- Acceptable <= 1 mm
- Not acceptable > 1 mm

2.8. Binding processes

When additional elements (inlays, fixed insert sheets and loose inserts, etc.) are to be used in the materials, they should be carefully described and an accurate indication of where they are to be placed in the publication should be provided. All comments should be confirmed by electronic mail.

2.9. Cutting of sheets

Permissible deviations when cutting sheets into individual pieces:

- Acceptable <= 1 mm
- Not acceptable > 1 mm

2.10. Folding and perforation

Deviations as regards the fold against the fold line are the result of the preceding processes, i.e. cutting, and they can go up to 1.5 mm. In the event that, in addition to cutting and folding, a leaflet undergoes additional processes such as die-cutting, it has to be assumed that the deviation as regards the fold against the fold line may increase up to 2 mm.

Permissible deviations for pages within a folded signature and for individual pages	
for a 4-page folded signature without a crease	+/- 0.5 mm
for a 4-page folded signature with a crease	+/- 1.0 mm
for 8-page folded signature	+/- 1.0 mm
for a 12-page folded signature	+/- 1.5 mm
for a 16-page folded signature (and larger)	+/- 2.0 mm

2.11. Saddle stitch binding

Correctly crafted saddle stitch binding has the following features:

- the staples are not too tightly clinched, thus preventing the folded signatures from being torn inside the cover along the fold line,
- the number of staples used is consistent with the order of the Client,
- the staples keep the edges of the publication in line,
- the staple ends do not overlap.

In standard saddle stitch binding the staples are placed at $^1/_4$ of the height of the spine as measured from the footer to the header. The positioning of the staples should not deviate either vertically or horizontally.

Permissible deviations in the finished product		
	Vertical positioning, flat staples	Vertical positioning, loop staples
Acceptable	<= 3 mm	<= 2 mm
Not acceptable	> 3 mm	> 2 mm

As regards saddle stitch binding crafted using loop staples, it is not acceptable for the positioning of the loop staples to deviate to such an extent as to result in increasing or decreasing the distance between them and thus preventing them from being freely inserted into a ring binder. The standard loop size is 6 mm and the distance between them is 80 mm measured from the centre of the loops. The number, type and shape of the staples should be specified by the Client prior to commencement of the binding process.

2.12. Perfect binding

Perfect binding can be divided into two types of binding crafted using hot-melt and PUR technology:

- perfect binding,
- sewn perfect binding (suggested for coated materials with a grammage of more than 115 g/m^2).

The choice of binding depends on the further intended use of the publication being bound. The minimum thickness of the spine is 2 mm, while the maximum thickness of the spine is 62 mm.

When choosing perfect binding, it should be remembered that when performing in-line gluing on papers with low absorption properties (MWC, LWC), the glue may penetrate the book block. Glue penetration cannot be eliminated entirely without affecting the durability of the spine.

To be deemed to have been properly crafted, binding has to withstand a force of over 4.5 N/cm as regards the tearing of individual sheets from the publication. The durability of perfect binding can be verified organoleptically. For binding to be deemed to have been properly crafted, its folded signatures (sheets) cannot fall out as a result of the publication being opened in a regular manner. In addition, binding is deemed durable if – when holding the publication by one of its middle sheets and shaking it gently – the sheet holds the weight of the entire book block and does not fall out.

Side gluing between the cover and the inside overlaps by a conventional 7 mm on each page (second page of the cover and first page of the inside and last page of the inside and third page of the cover) and covers the image along the gluing line. As far as spreads to be printed on those pages (images/graphic elements to be printed over more than one page) are concerned, it is necessary to move them apart by 7 mm away from the spine (the image joint is then shifted by 7 mm). Internal spreads should also be moved away from the spine by 1.5 mm per page. It is possible for the glue to go over the crease set for the side gluing by up to 1 mm.

Grain direction is also of importance as far as the durability of binding is concerned. The incorrect alignment of fibres in the folded signatures of the inside of the publication can result in cockling within the spine along the gluing line, which consequently makes it difficult to smoothly open the publication. The incorrect

alignment of fibres in the folded signatures of the inside of the publication in relation to the cover (fibres running perpendicular to the spine) is often dictated by the format of the project, a cost-effective layout of pages/pieces on the printing sheet and the print quality – at the same time, Books Line is not liable for this.

The folded signatures of the inside of the publication should not be varnished along the spine as it will significantly weaken the durability of perfect binding; too big a difference between the grammage of the cover and the inside can cause the finished product to come apart.

Moreover, the format of the project to be bound and where the glue is applied within the publication are also of importance as far as durability of perfect binding is concerned (album format and the spine running along the shorter edge will significantly weaken the durability of perfect binding). This results from the ratio of the length of the edge glued to the length of the edge perpendicular to the edge glued.

It is possible for the glue and the ends of the thread used to sew the folded signatures to form the book block to go over the crease set for the side gluing by up to 1 mm. Tread may be visible within the folded signatures and there may be a very small amount of glue visible where the thread goes through the spine of each folded signature. As far as sewn perfect binding is concerned, there may be a slight lift of the spine along the cutting line, which is due to the difference in the thickness of the spine as compared to the rest of the bound surface.

Permissible deviations in the finished product:
Dimensional stability of the book

- Acceptable <= 1 mm
- Not acceptable > 1 mm

Shift in registration of the graphics on the spine of the book

- Acceptable <= 1.5 mm
- Not acceptable > 1.5 mm

UV/textured/raised varnish shift

- Acceptable <= 1 mm
- Not acceptable > 1 mm

Dry/metallic and colour foil embossing deviation

- Acceptable <= 1.5 mm
- Not acceptable > 1.5 mm

2.13. Hardcover binding

A hardcover book consists of a book block, to which the same standards apply as to perfect bound and thread sewn books, and a rigid protective cover

(cardboard/covered base cases), the quality parameters for which are as stated below:

Permissible deviations in the finished product:
Cover format deviation

- Acceptable <= 1 mm
- Not acceptable > 1 mm

Deviation in positioning of the book block within the cover

- Acceptable <= 1 mm
- Not acceptable > 1 mm

Cardboard thickness deviation

- Acceptable <= 5 %
- Not acceptable > 5 %

Protruding edges size deviation

- Acceptable <= 1 mm
- Not acceptable > 1 mm

Shift in registration of the graphics on the spine of the book

- Acceptable <= 1.5 mm
- Not acceptable > 1.5 mm

UV/textured/raised varnish shift

- Acceptable <= 1 mm
- Unacceptable > 1 mm

Dry/metallic and colour foil embossing deviation

- Acceptable <= 1.5 mm
- Unacceptable > 1.5 mm

Additional deviations for hardcover publications:

As regards colour embossing on textured materials, partial discoloration of the printed surface is permitted (depending on the coating material used). The porosity of the cover depends on the quality and degree of smoothness of the surface of the smoothened cardboard. Due to the use of water-based glue during the binding process (joining of the inside with the cover), it is possible for cockling to occur on the book block and end papers. Hardcover binding can come with a flat or rounded (cambered) spine. The quality and degree of the cambering depend on the texture of the material used (type of paper), the number of pages in the book and the format of the project itself.

2.14. Format of the finished product

The format of the finished product is measured in respect of two dimensions: from the spine to the front edge of the product – width, and from the top edge to the bottom edge of the product – height. The format of the finished product should meet the parameters specified by the Client.

Permissible deviations from the order as regards the format of the finished product:

- Acceptable <= 1 mm
- Not acceptable > 1 mm

The trimmed, perpendicular edges of the product should form a right angle (90°), the deviation from rectangularity is measured in relation to the spine and should never exceed 2 mm as measured along the longer edge of the publication:

- Acceptable <= 1.5 mm
- Not acceptable > 1.5 mm

2.15. Shortfall in terms of the print run

The printing house stipulates that there may occur deviations in terms of the number of the finished products as compared to the order:

Print run (no. of copies)	**Acceptable maximum deviation**
1 - 99	5%
100 - 499	3%
500 - 1999	3%
over 2000	2%

In the event that a shortfall occurs in terms of the print run or the Client determines the presence of defective copies, where the volume/number does not exceed the values specified in the table, complaints will not be accepted (unless otherwise provided in the agreement entered into by the parties). The Client will be notified of any shortfalls in terms of the print run detected at Books Line prior to shipment of the goods, and at the same time the invoice issued for the completion of the order will be automatically reduced in proportion to the shortfall.

3. Packaging

As a rule, the goods are packed in 5-layer corrugated cardboard boxes (double wall, EB flute, grammage: 618 g/m^2).

Standard box formats:

- 400 mm x 280 mm x 400 mm
- 365 mm x 240 mm x 375 mm
- 303 mm x 216 mm x 360 mm

The date confirmed in the system by the Client is the date of shipment of the goods from the printing house, with physical delivery of the product, depending on the destination, taking from 1 working day upwards:

- domestic (Poland) shipments up to 200 kg – 1 working day,
- full-pallet domestic (Poland) shipments – 2 working days.
- International shipments depending on the destination and quantity – between 2 and 7 working days.

In the event that damage to the delivered goods is detected, the Client is obliged to fill in the parcel damage report and prepare photographic documentation in the presence of the forwarder. Complaints will be processed based on the above documents.