



ISO 12647 – Explanation and Facts

Felix Schoeller jr. | Group Product Management | techn. Support M. Batta

Explanation

ISO 12647 describe a standard for process control for the production of half-tone color separations, proof and production prints.

The ISO 12647 norm is classified in seven parts and will be constantly updated.

- Part 1: Parameters and measurement methods
- Part 2: Offset lithographic processes
- Part 3: Coldset offset lithography on newsprint
- Part 4: Publication gravure printing
- Part 5: screen process and printing
- Part 6: flexographic printing
- Part 7: Proofing processes working directly from digital data

PART 2 STANDARDIZED AND SEPARATE 5 TYPES OF PAPER FOR THE OFFSET PRINTING.

- Type 1: glossy coated paper
- Type 2: matt coated web offset paper
- Type 3: glossy coated web offset paper
- Type 4: uncoated paper
- Type 5: uncoated, yellowish paper (ground wood pulp)

Paper type	White backing			Black backing			Gloss	ISO-Brightness
	L*	a*	b*	L*	a*	b*		
1	95	0	-2	93	0	-3	65	89
2	94	0	-2	92	0	-3	38	89
3	92	0	5	87	-1	3	55	70
4	95	0	-2	92	0	-3	6	93
5	90	0	9	88	0	6	6	73
Tolerance	+/- 3	+/- 2	+/- 2	+/- 3	+/- 2	+/- 2	+/- 5	-

Measurement values for the individual paper types for offset printing (color measurement according to ISO 13655, gloss measurement according to ISO 8254-1, ISO brightness measurement according to ISO 2869 and ISO 2870)

Details

ISO 12647-1:2004 specify parameters that define printing conditions for the various processes used in the graphic arts industry. Practitioners wishing to work to common goals may use the values of the parameters specified in the exchange of data to characterize the intended printing condition and/or for the process control of printing.

ISO 12647-2:2004 specifies a number of process parameters and their values to be applied when preparing colour separations for four-colour offset printing or when producing four-colour prints by one of the following methods: heat-set web, sheet-fed or continuous forms process printing, or proofing for one of these processes; or offset proofing for half-tone gravure.

ISO 12647-3:2005 specifies a number of process parameters and their values to be applied when preparing colour separations for newspaper single or four-colour printing and proofing. The parameters and values are chosen in consideration of the complete process, covering the process stages: colour separation, film setting, making of the printing forme, proof production and production printing.

ISO 12647-4:2005 specifies a number of process parameters and their values to be applied to four-color publication gravure printing. The parameters and values are chosen in view of the complete process covering the process stages color separation, making of the printing form, proof production and production printing. Parameters and values are chosen in consideration of the complete process, covering the process stages: color separation, film setting, and making of the printing form, proof production and production printing.

ISO 12647-5:2001 this part of ISO 12647 specifies a number of process parameters and their values to be applied when preparing color separations for four-color screen process printing when producing four-color proof and production prints by flat bed or cylinder screen printing.

The parameters and values are chosen in view of the complete process covering the following process stages: color separation, making of the printing form, proof production, production printing, and surface finishing.

ISO 12647-6:2006 specifies a number of process parameters and their values to be applied to four-colour process printing by the flexographic printing process for packaging and publication, excluding newsprinting. The parameters and values are chosen in view of the complete process covering the process stages "colour separation", "film setting", "making of the printing forme", "proof production", "production printing" and "surface finishing". This covers printing on printing substrates which are nearly white or on films to which a white coating has been applied.

ISO 12647-7:2007 specifies requirements for systems that are used to produce hard-copy digital proof prints intended to simulate a printing condition defined by a set of characterization data. Recommendations are provided with regard to appropriate test methods associated with these requirements. In addition, guidance with respect to the certification of proofing systems related to specific printing condition aims is also included.

ISO 12647-7:2007 is independent of the method used to produce a digital proof print.