

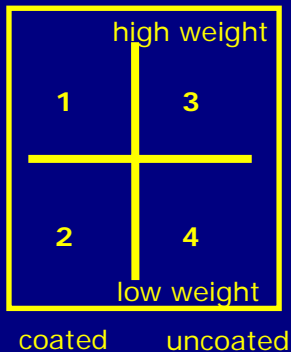
3 Paper Properties and Standardized Printing to ISO 12647-2

Modified paper categorization (proposal)
Clarifying some possible misunderstandings



Revision of ISO 12647-2 (2012) - Proposal: Updated categorization of printing conditions [PrC]

Paper Category [PaC] Description



- 1. Coated papers [PaC 1]
- 2. Coated papers [PaC 2]
- 3. Uncoated papers [PaC 3]
- 4. Uncoated papers [PaC 4]

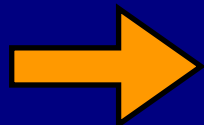
TVI curve selection

- 1. regular screens
- 2. fine screens [NP]

Process Control Aims*



* Fix printing sequence KCMY



- 1. There are 4 CMYK, RGB, CMY100, W solid colorations
- 2. There are 8 (4 paper types x 2 TVI settings) "spot on" specific PrC
- 3. There are many specific printing conditions (PrC) within tolerance

Revision of ISO 12647-2 (2012) - Proposal:
Updated categorization of printing conditions [PrC]
A more flexible, practical paper categorization [PaC]
Modified paper categorization (proposal)

high weight 1 coated	high weight 3 uncoated
coated 2 low weight	uncoated 4 low weight

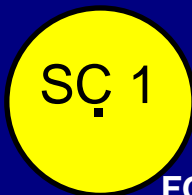
1. Coated papers [PaC 1]
2. Coated papers [PaC 2]
3. Uncoated papers [PaC 3]
4. Uncoated papers [PaC 4]

General and special printing conditions (PrC)

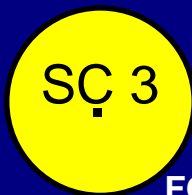
1. Coated Papers [SC*1]: FOGRA39, FOGRA43 (Coated woodfree) etc.
 2. Coated Papers [SC*2]: FOGRA40, FOGRA41, FOGRA45**/46** (SC, MFC, LWC)
 3. Uncoated Papers [SC*3]: FOGRA47**, FOGRA44 (Uncoated, Uncoated NP) etc.
 4. Uncoated Papers [SC*4]: FOGRA42 (SNP) etc.
- *SC = Solid Coloration, * published June 2009*

“Spot on”

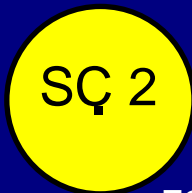
Reference PrC - for artwork



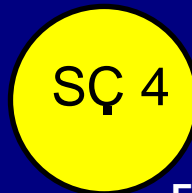
FOGRA39



FOGRA47*



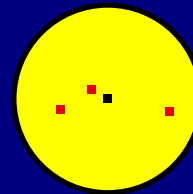
FOGRA45*



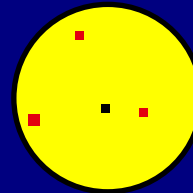
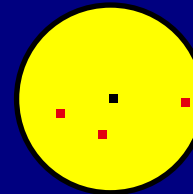
FOGRA42

“Within Tolerance”

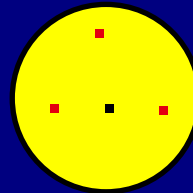
Application PrC - when reference PrC is not close enough (“specific PrCs”)



FOGRA27, GraCoL#1...FOGRA29, FOGRA30 ...



FOGRA28 GRACoL#3...



NN

"Offset 2009" (Update 2009)

Standard printing to ISO 12647-2 – Offset 2004-2009

bvdm/ECI/Fogra Projects – Fogra CharData - ECI Profiles

Profile (ECI)	PT	screen	TVI %**		TAC %	Kmax	K/GCR	CharData	year
ISO Coated v2 300	1/2	AM	13	16	300	95	K9/10	FOGRA39	2007
ISO Coated v2	1/2	AM	13	16	330	95	K9/10	FOGRA39	2007
PSO LWC Improved	3	AM	16	19	300	98	K10/10	FOGRA45	2009
PSO LWC Standard	3	AM	16	19	300	98	K10/10	FOGRA46	2009
PSO Uncoated ISO12647	4	AM	19	22	300	98	50	FOGRA47	2009
ISO Uncoated yellowish	5	AM	19	22	320	100	K9/5	FOGRA30	2004
SC paper	SC	AM	16	19	270	100	K9/5	FOGRA40	2007
PSO MFC paper	MFC	AM	16	19	280	98	50	FOGRA41	2008
PSO SNP paper	SNP	AM	19	22	260	98	K9/10	FOGRA42	2008
PSO Coated NP 300 ISO..	1/2	NP/FM	28	28	300	98	50	FOGRA43	2008
PSO Coated NP 330 ISO..	1/2	NP/FM	28	28	330	98	50	FOGRA43	2008
PSO uncoated NP ISO..	4	NP/FM	28	28	300	98	50	FOGRA44	2008

NP = non-periodic screen (FM) | SC = super calandered, MFC = machine finished coated, SNP = standard newsprint paper (heatset) | ** TVI% for CMY, TVI% for K (non-periodic screen : KCMY same value)
TAC = total area coverage/ tone value sum

Clarifying some possible misunderstandings

On optical brightener in papers (OBA)

- *1. Printers do not want to „abandon“ the optical brightener in papers (OBA) – it is very often a customer requirement*
- *2. Printers are able to handle OBA in papers within standardized printing concept – it is not always easy but it works – as daily practice shows us*
- *3. Solutions, software such as OBC/XRite provide support for better proof-to-print-match*

Clarifying some possible misunderstandings

... on optical brightener in papers (OBA)

- *It is not recommended to establish a standard for proofing substrates with different levels (amount) of optical brightener. Why?*
- *It does not solve the problem: mismatch of measurement (device) and visual appraisal (eye)*
- *Printers, prepress companies are typically not handling more than one proofing substrate (calibration, profiles)*
- *The increase of monitor proofing (softproof) will reduce the hardcopy proof dramatically (to a niche in 5-8 years)*

Clarifying some possible misunderstandings

... Illuminant D65 versus D50?

- *D65: paper manufacturing, unprinted substrate*
- *D50: prepress and print process control*
- *D65 and D50 are able to coexist in a reasonable way (data D50 provided by paper manufacturers)*
- *There are important reasons to keep D50 in the printing industry, photography for process control (see eg article A. Kraushaar, Fogra)*