APTech Brand Packaging Council Schema
based on ISO 19303-1 requirements

	ISO Reference	Users	Measurement Metric
General Requirements	ISO 19303-1 Partner Workflows	Brand, Design, Premedia, Printer, Plates, Converters	Documentation of Standard operating procedures on all requirements
	ISO 19303-1 Requirements for Parties	Brand, Design, Premedia, Printer, Plates, Converters	Details Below Chart

Correct Viewing Cabinets	ISO 3664:2009		
Validation of Instruments	ISO 13655:2009 or later	Per Manufacturers Requirements	
Color Judgement	Update ISO ASTM reference	Munsell FM 100 Hue tester	

File Format:			
Photography	Tiff / Raw		Aim Profile Communicated
Design Files	ISO 15930-7 / GWG 2015 Pack Spec	PDF-X4 1.6	Embedded ICC Aims
PreMedia Files	ISO 15930-7 / GWG 2015 Pack Spec	PDF-X4 1.6	Embedded ICC Aims

Proofing	ISO 12647-7		Document Dataset used and aims met
Softproofing	ISO 12646 Monitor/ ISO 14861 System		Document Dataset used and aims met

Platemaking	ISO 12647-6 Flexographic Printing	Midtone and mindot shall be present and verified	Request Documentation from Suppliers
Substrates	ISO 15397	Defining aims and tolerances for substrates	Request Documentation from Suppliers

Workflow	ISO 10128 / ISO 12647-6	Match customers defined Color space	

ICC Conversion	ISO 15937		
Near neutral calibration	CGATS TR015		
TVI calibration	ISO 12647-2		
Brand Colors	ISO 20654 / ISO 17972	Spot Color Tone Value / Color Exchange Format	

Colorimetery Requirements*	ISO 12647-6		
BarCode Verification	ISO / ASTM		
Reporting	ISO 19302-1 Message / ISO 20616-2 Format	PQR Under Development PQX format	

*Example from ISO 12647-6
CMYK: h<6
Brand Color: De00 <2
Brand provides tolerance aims to procurement

COA / COC			

Rub Resistance	ASTM D7207	Sutherland Rub Test	
Solvent Rub Test	ASTM D5264		
Lightfast	ISO 105 b02		
COF	ASTM C1028		
Brand Specific Defined			

Brands supporting this Schema

3M, Barilla, Coca-Cola, Diageo, FritoLay, Pepsico, Kraft Heinz, Johnson & Johnson, Kimberly Clarke, Proctor & Gamble, PetSmart

RESPONSIBILITIES BY PARTY

Consumer Product Company (CPC)

- Viewing Conditions compliant with ISO 3664 – Measurement Documentation
- Instrument and Settings for Measurement Verification
- Specification of Aims and Tolerances
- CMYK - aims
- Spot or Brand Colors - aims
- Registration - requirements
- Design Guide - Overview of objectives
- Structural Requirements
- Die Lines indications
- Standard operating procedures (SOP) documenting all procedures, and equipment upgrades

Designer, Comp House and Photographer

- Viewing conditions compliant with – ISO 3664
- Instrument for Measurement compliant with ISO 13655
- File Format (Native files or PDF/X-4)
- Software compatible with Vector/Raster formats
- Pre-flighted File Delivery – PDF/X-4 – GWG Packaging 2015
- Photography RAW and TIFF
- Validation Print Protocol - Validation of Color Accuracy – Verified 12647-8 with documentation
- SOP documenting all procedures, and equipment upgrades

Pre-Media

- Viewing conditions compliant with – ISO 3664
- Pre-flight with reporting to supplier procedure for process improvement
- Instrument for Measurement Verification
- File Format – ISO 15390-7 PDF/X-4
- Pre-flighted File Delivery – PDF/X-4 – GWG Sheet Spot 2015
- Validation Print Protocol - Validation of Color Accuracy – Verified 12647-8
- Contract Proofs per ISO 12647-7 with documentation
- Workflow per ISO 10128
  - ICC link
  - Near NEUTRAL CALIBRTION
  - ISO 12647 – series TVI (tone value increase)
- Pre-flighted File Delivery - PDFX4 – GWG Packaging 2015
- SOP documenting all procedures, and equipment upgrades
- Plate Supplier shall provide
  - Micro Enlargement and Measurement on Minimums, and 50% - all plate delivery

Printer to Converter

Printer is responsible to the converter for:

Preflight - verify elements received are complete and accurate

Reporting to sender if files are not accurate for continuous improvement

- Accurate Viewing – ISO 3664
- Instrument for Measurement Verification
- Bar Code verification per ASTM
- CoA for all incoming receivables

- Substrate – Documentation per ISO 15397
- Inks - provide CoA with spectral data and conformance
- Color aims met
- Light fast Qualities met
- Laminates
- Reporting of aims being met – ISO 12647-6
- SOP documenting all procedures, and equipment upgrades

Converter to Brand

Converter is responsible to the printer for:

- CoA CoC per customer requirements – document and delivery – ASTM/ ISO Testing and Reporting protocols
- Rub Resistance
- Solvent Rub Testing and documentation
- Lightfast Testing and documentation
- COF testing and documentation

- Custom Testing Protocol – Consumer Products Company Defined
- Additional Product Specific Test as Require and Documented
- SOP for all procedures and documentation

APTech, as an authorized reseller, will provide the ISO standards named in the schema and listed here for purchase. Contact Debbie Orf at dorf@aptech.org for more information.

Standard Description	Regular Price	10% discount
ISO 3664:2009 **Graphic technology and photography – Viewing conditions** Specifies viewing conditions for images on both reflective and transmissive media, such as prints (both photographic and photomechanical) and transparencies, as well as images displayed in isolation on colour monitors. This applies in particular to: critical comparison between transparencies, reflection photographic or photomechanical prints and/or other objects or images; appraisal of the tone reproduction and colourfulness of prints; critical appraisal of transparencies; and appraisal of images on colour monitors. This International Standard is not applicable to unprinted papers.	$173.00	$155.70
ISO 13655:2017 **Graphic technology — Spectral measurement and colorimetric computation for graphic arts images** Specifies procedures for the measurements and colorimetric computations appropriate to objects that reflect, transmit and emit light, such as flat-panel displays. It also specifies procedures for computation of colorimetric parameters for graphic arts images. Graphic arts include, but are not limited to, the preparation of material for, and volume production by, production printing processes that include offset lithography, letterpress, flexography, gravure, screen and digital printing.	$185.00	$166.50
ISO 15930-6:2004 **Graphic technology – Prepress digital data exchange using PDF – Part 6: Complete exchange of printing data suitable for colour-managed workflows using PDF 1.4 (PDF/X-3)** This part of ISO 15930 specifies the use of the Portable Document Format (PDF) Version 1.4 for the dissemination of complete digital data, in a single exchange, that contains all elements necessary for final print reproduction. Colour-managed, CMYK, gray, RGB or spot colour data are supported.	$123.00	$110.70
ISO 17972-4:2015 This part of ISO 17972 defines an exchange format for spectral measurement data of inks to provide a means to characterize spot colour inks to allow reliable printing and proofing of products that have been designed using these inks. Only isotropic (paper-like) substrates are within the scope of this part of ISO 17972 which is limited to application areas where the same ink and paper combination that has been characterised is used when printing.	$88.00	$79.20
ISO 12647-6:2012, Graphic technology – Process control for the production of half-tone colour separations, proofs and production prints – Part 6: Flexographic printing This part of ISO 12647 specifies the requirements for the exchange of data and information necessary for the definition of the aims for four-color flexographic printing of packaging and publication materials, including newsprint. It is based on the use of color characterization data to define the colorimetric printing aims and includes appropriate assignment of responsibility for and recommended tolerances on critical parameters of the flexographic printing process.	$123.00	$110.70
ISO 15397:2014, Graphic technology – Communication of graph paper properties Specifies the list of relevant properties of paper substrates to be communicated between the paper and printing industries. It is applicable to papers intended to be printed in rotogravure, cold-set web offset, heat-set web offset, sheet-fed offset, and flexographic printing processes and to proofing substrates.	$88.00	$79.20

ISO/TS 10128:2009, Graphic technology – Methods of adjustment of the colour reproduction of a printing system to match a set of characterization data Specifies methods for the adjustment of the digital content data that is input to a printing system to achieve consistency in the printed results among a number of presses printing to the same general aim conditions.	$88.00	$79.20
ISO/PAS 15339-2:2015, Graphic technology — Printing from digital data across multiple technologies — Part 2: Characterized reference printing conditions, CRPC1–CRPC7 This part of ISO/PAS 15339 specifies a limited number of characterized reference printing conditions that span the expected range of colour gamuts used for the production of printed materials from digital data, regardless of the printing process used. Their use is described in ISO/PAS 15339-1.	$88.00	$79.20
ISO 12647-2:2013, Graphic technology - Process control for the manufacture of half-tone colour separations, proof and production prints - Part 2: Offset lithographic processes This part of ISO 12647 specifies a number of process parameters and their values to be applied when producing colour separations, printing forms and print production for four-colour sheet-fed and web-fed offset printing presses excluding coldest offset lithography on newsprint. This third edition cancels and replaces the second edition which has been extensively revised. The revisions include deletion of film-based requirements; changes in proof requirements; changes in printing conditions; changes in the colouration of the primary and secondary solids; introduction of new tone value increase curves; general clean up. 32 pp.	$149.00	$134.10
ISO 20616-2:2020, Graphic Technology - File Format For Quality Control And Metadata - Part 2: Print Quality EXchange (PQX) This document specifies an extensible file format in conformity with W3C Extensible Markup Language (XML) 1.0, for the exchange of print quality data and metadata between quality control applications including but not limited to colour measurement, process control and quality management systems.	$162.00	$145.00
ISO 20654:2017, Graphic technology — Measurement and calculation of spot colour tone value Defines a metric for assessing intermediate tones of a spot ink. This method for the calculation of Spot Colour Tone Value (SCTV) produces approximately uniform visual spacing of tones between substrate and solid. It can be calculated from spectral reflectance or colorimetric measurements of the solid ink, substrate and one or more patches of intermediate tones to be measured.	$45.00	$40.50

Please note: ISO 19303-1 will be available when published