

3M Corporate General Specification RD1200 (summary version) Print Quality Management (PQM) Program

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Author: Bill Herzog – Senior Production Artwork Leader email: weherzog1@mmm.com

Overview\Purpose

The 3M Print Quality Management (PQM) Program is designed to provide information related to the consistent reproduction of commercially printed packaging and printed product across all 3M Business Groups brands. The purpose is to maintain consistent high print quality and color accuracy from around the world to leverage the value of packaging and product in expressing a brand promise, delivering a positive and consistent experience while differentiating from our competition. The information contained in this document provides information related to standards, equipment, tolerances and sampling expectations that must will be used to assess and control the printing of these packaging supplies and products.

Color Space\Tolerance

- Color Space: CIELab ($L^*a^*b^*$) for spot or line colors (e.g. Pantone® 354 Green) and process (CYMK) colors.
- Color tolerance method: Delta E 2000 (ΔE_{00}) with l:c ratio of 1:1 (lightness to chroma ratio)

Instrumentation

- Spectrophotometer or spectrodensitometer instrumentation setting:
 - Aperture: 2.0 mm (minimum value)
 - Illuminant: D50 (simulation for daylight illuminate)
 - Observer Angle: 2°
 - Instrument must be a M0 device or set to read as a M0 reader (with no filters (e.g. "UV Cut"))

Viewing Conditions

- All color measurements taken from printed samples, prepress proofs or ink drawdowns **must** be under D50 light source.

Measurement Surface

- If printing on clear, translucent, or other non-opaque substrate use a "white backing" material with a material grade equivalent to GRACol7® Grade 1 paper*. ISO standards recommend no brighteners and target CIELab ($L^*a^*b^*$) values of: $L^* = 95$, $a^* = 1$, $b^* = -4$.

Submit Ink Draw Downs

- Submit minimum of 2 sets on actual production substrate including Delta E 2000 (ΔE_{00}) output results.
- For 3M "Brand" colors - see target CIELab ($L^*a^*b^*$) color values listed in the **complete RD1200 PQM document Table 4 and 4A** or specified by 3M Design or 3M Business Groups/Div. (or its designee).
- For Non-3M "Brand" colors - use the target CIELab ($L^*a^*b^*$) color values in the **2010 Pantone Plus Colors digital library**.
- For non-Pantone colors - use the target CIELab ($L^*a^*b^*$) color values of the color target provided by 3M Design or 3M Business Groups/Div. (or its designee).

Note: Allowable Delta E tolerance for **all** ink drawdowns is 2.0 or less. The approved ink draw down is a confirmation the color can be printed...it is **not** to be used as the actual color target.

Production Run – acceptable color tolerance

- **For standard offset, digital (indigo) and flexo print processes:**
 - For primary brand and trade dress background colors, the allowable Delta E 2000 (ΔE_{00}) tolerance is 2.5 or less.
 - For secondary line colors, the allowable Delta E 2000 (ΔE_{00}) tolerance is 3.0 or less

Submit Production Printed Press Samples

- Minimum of 3 press samples representing the entire production run. One each from beginning, middle and end of production run. Print samples must include associated printed color bar.

Important: See complete Print Quality Management Program RD-1200 document for all detailed specifications and requirements.