



# Commercial Certificate Evaluation Report

For HP Indigo



| Supplier Contact Information    |   |
|---------------------------------|---|
| Supplier Name                   | WestRock  |
| Supplier Address                | 104 East Riverside Avenue, Covington, VA, 24426 |
| Supplier Country                | USA   |
| Product Name                    | Tango® Digital C1S 12 pt                        |
| Product Category                | Paper   |
| Grammage (gsm)/Basis weight (#) | 230 gsm   |
| Microns/Caliper                 | 0.012 in/12 Pts                                 |
| Certification Number            | RI7500-23-6977                                  |
| Certification Center            | RIT   |
| Date of Evaluation              | 06/28/2023                                      |
| Evaluated on                    |   |
| Certified for                   | 7500, 7000, 7600, 7800, 7900, 10000 & 12000     |
| Evaluation Process              | Interpolation                                   |

**Certification Validity**

This substrate is certified for the next two years from the date of evaluation, provided there is no change to the paper properties or production processes. At the end of two years from the original evaluation date, if there have been no changes in paper properties or production processes, the certification can be extended for another two years. After four years from the original certification date, a new certification is required.

| Evaluation                   | Measure                                 | Result | Grade (stars) | Comments |
|------------------------------|---|--------|---------------|----------|
| <b>Runability</b>            |   |        | ★ ★ ★         |          |
| Simplex                      | Number of Jams                          |        |               |          |
| Duplex                       | Number of Jams                          |        |               |          |
| <b>Fixing</b>                |   |        | ★ ★ ★         |          |
| Peeling                      | 100% K in 4 color mode, % ink remaining |        |               |          |
| <b>Photo Peeling</b>         | 290 K in 4 color mode, % ink remaining  |        |               |          |
| <b>Photo Recommended</b>     |   |        |               |          |
| <b>White Ink Recommended</b> |   |        |               |          |
| <b>Blanket Compatibility</b> |   |        | ★ ★ ★         |          |
| <b>Evaluation Result</b>     |   | Pass   |               |          |

Comment Detail:

The substrate certification procedure incorporates several processes. This checks for:

**Runability:**

The ability of the substrate to run smoothly through the press in various print modes.

**Fixing:**

Ink-substrate interaction as determined by the degree of ink adhesion to the substrate for standard and photo-related applications as measured in a tape peel test of the image.

**Blanket Compatibility:**

Blanket-substrate interaction as determined by:

- 1) Ink-transferability, which is the quality of ink transfer from the blanket to the substrate as reflected in highlight dots, thin lines, heavy images and image edge integrity;
- 2) Ink-transferability after a self-cleaning procedure “cleaner pages” (intended to clean the blanket’s release layer and restore transfer performance) has been performed.

**Approval for Photo and White Ink Applications:**

Applications that use white ink and or light cyan/light magenta inks or photo related applications are strongly recommended to use robust media products due to additional ink coverage demands of these applications. This media has been tested and approved to perform well with higher levels of ink coverage, and is therefore recommended for photo-related and/or white ink type applications. However, it is strongly recommended that user acceptance ultimately be evaluated per individual application and finishing requirements, etc. The test results are provided as a guide; assess actual performance to determine suitability for individual use.

**Star Rating**

- ☆☆☆ Best performing substrate: excellent runnability / High ink adhesion / Excellent blanket performance with no or very little issues, should generally work well for high coverage and photo applications.
- ☆☆ Recommended substrate: good runnability/good ink adhesion / print cleaners are generally required at a nominal frequently.
- ☆ Good substrate: Acceptable runnability / acceptable ink adhesion / print cleaners are generally required more frequently

|                              |  | ☆☆☆   | ☆☆  | ☆   |
|------------------------------|--|---|---|---|
|                              | Measurement  | Best-performing substrate                                     | Recommended substrate   | Good substrate  |
| <b>Transport</b>             | Runnability  | No jam and minor issues                                       | 1 jam or minor issues   | 1 jam and minor issues  |
| <b>Fixing</b>                | Peeling: 100% K  | >90%  | >80%  | >80% at one hour  |
|                              | Photo peeling: 290% K, 10 or 60 minutes                                      | >80% after 10 or 60 min                                       |   | N/A   |
| <b>Blanket Compatibility</b> | Performance evaluated when utilizing a mature blanket<br>Blanket performance | No transfer defects and no Picking above the limit is allowed | Cleaner pages were able to remove all Transfer defect and reduce the picking to below the limit | After cleaning small transfer defects and picking are still visible |

