



Substrate Evaluation Report

Specialty Media for the HP Indigo 7000

Customer Name: Nekoosa Coated Product

Customer Address: 841 Market St.

Nekoosa WI, 54457

Substrate Name: Nekoosa Indigo Durable Synthetic

Substrate Type: Synthetic

Weight: 230 gsm

Grain: Long

I.D. Number: RI7000-11-2152

Date of Evaluation: 7/25/2011

Caliper: 8 mil / 203 Microns

Evaluation Site: RIT

Evaluation Process: Specialty Media

| Evaluation | Measure | Result | Grade (# Stars) | Notes |
|-------------------|---------|--------|-----------------|-------|
| Runability | | | * * * | Pass |
| Simplex | # Jams | 0 | | |
| Duplex | # Jams | N/A | | |

| | | | | |
|---------------|--|-----------|--------------|------|
| Fixing | | | * * * | Pass |
| Peeling | 100% K in 4 color mode, % ink remaining | 100% | | |
| | 100% K in Monochrome mode, % ink remaining | N/A | | N/A |
| | 400% YMCK 100% each color, Visual Damage | No Damage | | |
| Flaking | <1 mm, % Coverage | 400% | | |

| | | | | |
|------------------------------|-----------|------|--------------|------|
| Blanket Compatibility | | | * * * | Pass |
| Evaluation Result | Pass/Fail | Pass | | Pass |

Note Detail:



The substrate certification procedure incorporates several processes. An initial screening evaluation is followed by a more comprehensive evaluation looking at the performance of the particular substrate within the press. This checks for:

- Runability:** The ability of the substrate to run smoothly through the press.
- Fixing:** Ink-substrate interaction as reflected in: The degree of ink fixing to the substrate for standard and photo-related applications the adhesion as measured in a tape peel test of the image. The degree of flaking of the ink layer. The fixing properties are measured through a range of blanket temperatures and pressures.
- Blanket Compatibility:** Ink-transferability the quality of ink transfer from the blanket to the substrate as reflected in highlight dots, thin lines, heavy images and image edge integrity. Blanket-substrate compatibility the interaction between the substrate and the blanket is checked for 'Blanket Memory' effect, reflected in gloss or density differences between solids and background areas of the previously printed image. Cleaner pages Blankets are routinely maintained by running "cleaner pages", a self cleaning method used to refresh the blanket's release layer.

Star Rating

- ***** 3 stars: best performing papers; fewer print cleaners needed; no blanket memories at least up to 1.2 K impressions.
- **** 2 stars: recommended papers; some print cleaners may be needed; slight memories may be seen at 1.2 K impressions.
- *** 1 star: good papers; print cleaners generally required; some memories may be seen at 1.2 K impressions. Approved tape test, after one hour.

| | | *** | ** | * |
|-----------------------|--|--|------------------------|------------------------|
| Measure | | Best-performing paper | Recommended paper | Good papers |
| Transport | Runability | 1 jam or other issues | 2 jams or minor issues | 3 jams or minor issues |
| Fixing | Peeling: 100% K, at 10 minutes | >97% or visually NO damage(ignoring gloss changes) | >90% | >80% at one hour |
| | Peeling: monochrome K, at 10 minutes | >97% or visually NO damage(ignoring gloss changes) | >80% | >70% at one hour |
| | Peeling: 400% YMCK, 100% of each color at 10 minutes | visually NO damage(ignoring gloss changes) | Any damage(visually) | Any damage(visually) |
| | Flaking: guillotine at 5 minutes | <1 mm at 400% K | <1 mm at 300% K | <1 mm at 200% K |
| Blanket compatibility | Cleaner pages OK after 1.2 K | 2nd cleaner page clean | 4th cleaner page clean | 6th cleaner page clean |